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A Monthly Newspaper published in the interests of the Berry Growers, Deciduous, Citrus, Dried and Canned Fruitgrowers, and Market Gardeners.

- by the -

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News in Brief

The Victorian Agent-General's Office in London reports that the King Cole, whilst an excellent Apple, is not yet sufficiently known. However, buyers will pay "Fancy" prices for selected packages. Trays of King Cole (23 Apples) realised 2/6 per tray.

The Sultana crop at Berri (S. Aust.) has been seriously damaged by frost. Other frost losses are reported. of being heard.

It is estimated that £10,000,000 is invested in the Australian Apple industry. Yet Australians eat less than half an Apple per day per head of population. An advertising campaign would lift consumption and make export and local marketing profitable.

The Pear litigation case initiated by the Batlow Co.-Op. is now in course Congratulations to Mr. J. G. B. Chemical bandages have again McDonald, orchardist, of Shepparton, on his election to the Victorian Legislative Assembly. He had an absolute partmental report. majority over all other candidates.

The Federal Government has placed £103,000 on the estimates to provide a grant to compensate for some of the losses on Apple and Pear export in the 1936 season. The amount works out at 4½d. per case.

The Apple crop this season in U.S.A. is the lightest for many years.

Excellent quality fruit was on display at the National Show at Brisbane in August.

Frosts have severely damaged Tomato and Potato crops in various parts of Victoria and New South

HARVEY" FRUIT GRADERS and Processing Equipment

Colour and Count Grading

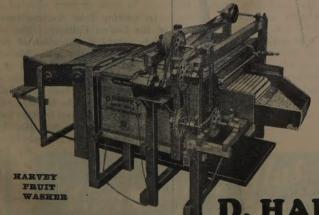
THE HARVEY IS 100 PER CENT. EFFICIENT FOR GRADING FLAT APPLES. IT STANDS THE FLAT FRUIT ON ITS TRUE GRADING EDGE, AND THE FRUIT IS NOT KNOCKED OFF ITS GRADING EDGE AND ALLOWED TO SLIDE ON ITS FLAT TO THE WRONG SIZED BINS AS IN THE CASE OF THE MECHANICALLY DRIVEN ROLLER.

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Tomato Graders
Passion Fruit Graders
Citrus Graders
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Citrus Graders
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Successful Fruit Advertising

N OUTSTANDING EXAMPLE of the value of advertising is the tion was rising only fractionally till "Eat More Fruit" campaign in 1921. The "Eat More Fruit" move-

In ten years, the imports of fruit figures. into the United Kingdom have been doubled, as the following table shows (figures given in cwt., from Board of increased from between 35,000 and

| lade letuins). | | 1 20,000 | 111 1001, 00 | 220,000 111 2000. |
|----------------|-----------|-----------|--------------|---------------------|
| Year. | Apples. | Pears. | Oranges. | Grapefruit. |
| 1901 | 1,830,210 | 348,886 | 5,281,657 | No separate return. |
| 1911 | 3,332,618 | 585,777 | 5,284,142 | No separate return. |
| 1921 | 4,001,134 | 748,992 | 5,857,600 | 21,449 |
| 1931 | 7,600,949 | 1,239,224 | 10,397,034 | 897,090 |
| | | | | |

EXPORT COUNCIL.

Important Conference at Adelaide Commencing October 26.

UCH INTEREST centres around the forthcoming annual con-ference of the Australian Apple and Pear Export Council, which

AUSTRALIAN APPLE AND PEAR | commences its session at Adelaide on Monday, October 26, 1936.

ment started in 1922, and the remarkable rise is at once seen in the

The number of retail fruit shops

The agenda paper includes the following:—Empire Fruit Conference (report by Mr. G. W. Brown); Imperial Economic Conference, London, 1937 and renewal of "Ottawa" agree-ments; co-operation with New Zealand, and the quota system; the question of including February shipments under the quota; the question of maturity of Apples for export; Federal co-ordinating officer; Federal grants and the question of research; consideration of the fruit freight agreement; increased weight of fruit in cases; organisation of growers' research committees and their co-ordination; the question of Russet on Pears; desirabilty of trade treaty with Germany.

The subject of marketing of fruit in Australia is listed, advertising to increase fruit consumption: Interstate Consultative Committee, reduction of varieties.

PERSONAL

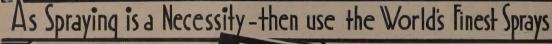
Mr. J. W. Blick, manager of the Fruit Section of the Producers' Distributing Co-op., Sydney, has just returned from his visit abroad. He believes that a quota system for the importation of Apples will be introduced in Great Britain to counter the manipulation of tariffs and currencies of other countries. More money should be spent on advertising.

On behalf of the Australian Apple and Pear Export Council, the President (Mr. J. B. Mills); Vice-President (Mr. C. O. Smith), and Mr. L. Taylor, a member of the Tasmanian State Fruit Board, have been actively engaged in consultation with Cabinet Ministers at Canberra in connection with matters of policy affecting the industry.

In retiring from the management of the Leeton Cannery, Mr. John Brady severs a connection of nearly 20 years' association with this work.

Mr. Brady, from the time of his appointment as foreman of the cannery in 1918, has been regarded as one of the most able servants of the State in his own line. In 1920 the Irrigation Commission sent Mr. Brady to the United States to study canning methods in that country. Mr. Brady was also largely responsible for the introduction of rice growing in Australia.

It is understood that Mr. Brady intends to live in retirement on his property at Leeton. Capable, energetic and courteous, "Jack" Brady will surely be missed from the position he has so ably fulfilled for so many





NEPTUNE RED SPRAY OIL NEPTUNE CRUDE SPRAY OIL NEPTUNE "CLARIFOL" LIME SULPHUR SOLUTION MACCLESFIELD BLUESTONE NEPTUNE BLUESTONE SNOW



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Ask our local agent for a copy of our hand-book, "Clean Fruit", which gives a wealth of information on all spraying matters.

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The Present Status of Calcium Arsenate in Codlin Moth Control

SCIENTIFIC TESTS WITH NON-ARSENICAL SPRAYS ARE BEING CONTINUED.

Success With Calcium Arsenate Under Specified Conditions.

Latest Advices from U.S.A.

By James Marshall, Entomologist, Washington State College, and Kermit Groves, Entomologist.

ODLIN MOTH CONTROL is one paper which mentioned more or less in connection with fruitgrowing in Australia,—as also in U.S.A.

Information regarding develop-ments with calcium arsenate have been published recently in the "Fruit World": in order to present a full statement of the situation, our American correspondent has sent a clipping from the "North-West Fruitgrower" (U.S.A.), giving the latest

The first instalment of the article appears in this issue, and the balance will be published in subsequent issues.

The Editor acknowledges with pleasure the receipt of letters of commendation regarding the recent article we published on this subject.

Comments and suggestions by readers are at all times welcomed.— Ed. "F.W. & M.G."

The information from Messrs. James Marshall and K. Groves, Entomologists is as follows:-

S late as 1927 no one on the A basis of sound demonstration was able to suggest a satisfactory substitute for lead arsenate in control of the codlin moth.

Seven years later there is good reason for believing that at least two readily available substitutes will give very similar results in the hands of the grower at no greater expense.

In the background still other substances, highly experimental it is true, appear to have even greater possibilities.

In 1929 Spuler and Dean of the Washington Experiment Station, Wenatchee, U.S.A., reported upon the satisfactory use of petroleum oilnicotine sulphate as a substitute for lead arsenate. Their findings have since been amply confirmed, but as most growers realise the high cost of this substitute is one which has proved an almost insurmountable obstacle to its continued use.

To-day we hear many statements occasionally rather wild-eyed, con-cerning the value of cryolite as a codlin moth spray. It might come as a surprise even to some of those who advocate it most strongly to learn that the origin of its use against codlin moth in the Northwest dates back to the work of E. J. Newcomer and R. H. Carter of the U.S. Department of Agriculture laboratories at

At the 1930 meeting of the Washington State Horticultural Association, their investigators presented a measure of effectiveness.

of the very live subjects in passing that the Federal Department of Agriculture began investigation of fluorine compounds in 1925. suggested using cryolite with fish oil and their work with this combination was later reinforced by that of Spuler and Webster et al, in 1931 and 1932 at the Washington Experiment Sta-

> In view of the present situation, it is interesting to read that New-comer and Carter's paper elicited two questions. One grower asked if they used any less than four pounds. another if they had any check plots. There has been ample demonstration that Newcomer and Carter did not claim too much for cryolite. Its use to-day is to a large extent conditioned by the problem of residue removal though excessive accumulation of fluorine in the soil might eventually be troublesome.

> Since 1933 insecticide investigations at the Washington Experiment Station have been devoted largely to non-lead arsenicals and two of them have shown promise.

> Of these, calcium arsenate has been studied more fully than zinc arsenite for the reasons that zinc arsenite. though successfully employed in these experiments, is more expensive, and arsenites are thought to be potentially more injurious to orchard soils than arsenates.

This paper briefly discusses the experimental development of calcium arsenate in control of the codlin moth at Wenatchee.

As a preliminary, at the risk of clouding the issue (though as a matter of fact to omit this would cloud it considerably more) attention will be paid to a point which has continually befogged the evaluation of codlin moth sprays at the hands of growers and investigators alike, the question, "When is one spray more effective than another?"

It is not unusual to meet individuals who have been utterly convinced that substances ranging from drated lime to pancake flour are better than lead arsenate. Mr. X sprays his orchard with lime and has few worms. Therefore, lime is an excellent insecticide, Mr. Y sets off a firecracker under each tree and harvests a crop, therefore firecrackers are the solution to the problem.

What is wrong with the deductions? Their weakness is twofold.

First, there was no control or yardstick or what you will, to act as a to what may be termed the experimental error. Without these necessary conditions, deductions may be completely meaningless.

To illustrate: this past season in one of the experimental orchards, a 12-acre block of Romes, there were 28 worms to 100 Apples at one side of the orchard in the check plots. At the other side in a plot sprayed with the same material at the same time by a similarly careful operator there were 255 worms to 100 Apples.

When one group of trees in an orchard may be ten times as wormy as another group sprayed with the same material, the difficulty of detecting small differences in the effectiveness of various materials will be obvious.

No attempt will be made to describe how this has been done in the course of our experiments with calcium arsenate. But it will be sufficient to say that though an experimental mixture may have given fewer worms per hundred Apples than the lead arsenate check, it may not be a better material. Conversely, if it has given more worms per hundred Apples it may not be poorer.

In order to provide a means of estimating whether a difference is sufficient to be significant, a value referred to as the average deviation from the mean of the checks, is included for each variety. If the difference between experiment mixture and check is less than this value it is probably due to chance. If greater, it is probably due to differences in the mixtures.

In the Winter of 1932-33, before any plans were made concerning the investigations of calcium arsenate for codlin moth control in this district, several weeks were spent in studying the literature upon the subject. There were few hints that calcium arsenate might be successfully used, general opinion being that it was not only a much less toxic insecticide than lead arsenate, but far too injurious to Apple foliage. As a matter of fact, such is the consensus of opinion among entomologists at the present

Despite the almost unanimous belief that calcium arsenate could not be adapted to codlin moth control, three points weighed heavily enough in its favor to warrant a thorough investigation of its possibilities.

First, one of the authors had used it successfully under the direction of Kelsall in Nova Scotia against a fairly similar insect and with no arsenical injury.

Second, Mote and Thompson, of the Oregon Experiment State, had used it with good results in the Willamette Valley of Oregon where, however, the codlin moth is not a serious

Third, no careful attempt had been made to determine why it seemed less effective than lead arsenate.

Second, no consideration was given | which time 45 different mixtures have been examined in the field and upwards of 100 in the laboratory, there are grounds for believing that at least under some circumstances calcium arsenate may be substituted for lead arsenate in eastern Washington.

Successful application has depended upon the addition of certain other substances for the purposes of preventing arsenical injury, causing it to be more adhesive, or both.

Before a discussion of the two types of calcium arsenate mixture suggested for trial, there is listed as determined by experiment, a number of ways in which calcium arsenate should NOT be used.

1-Alone

2-With fish oils.

3-With vegetable oils.

4-With ordinary colloidal spread-

5-With ordinary soaps.

6-With hydrated lime.

7-With oleic acid.

8-With mineral oil emulsified with soap.

9-With mineral oil or low unsulphonatable residue.

Should a grower who is using the fish oil-lead arsenate mixture decide to try a calcium arsenate mixture on a portion of his orchard, particular care must be taken that no fishoil come in contact with calcium arsenate. Spray tank and lines must be flushed with clear water both before and after using calcium arsenate and suitable precaution taken to avoid drift of one type of mixture to trees sprayed with another.

Calcium Arsenate Mixture For Light Infestations.

If a grower has been able to control the codlin moth with first brood applications of 3 pounds lead arsenate alone, or with soap, spreader or herring oil, he should secure fairly comparable results with a mixture consisting of calcium arsenate 4 pounds, zinc sulphate 1 pound, calcium hydrate 2 pounds.

The cost of the calcium arsenate combination should be about the same as the lead arsenate mixtures. Commercial calcium arsenate sells for about 8 cents per pound, zinc sulphate (23 per cent. zinc) about 5 cents and calcium hydrate (special superfine high calcium) about 2 cents.

The question may be raised "Why is it necessary to use more calcium arsenate than lead?"-The answer is that calcium arsenate though evidently as toxic to the codlin moth, does not adhere as well in his mixture, and consequently more is required.

The following table shows the measure of codlin

moth control attained

with 3:1:2 and 4:1:2 calcium arsenate mixtures as compared to lead arsenate over the three year period.

In one case (Jonathan, 1934) the To-day, three years after investi- difference in infestation between plots gations with calcium arsenate were sprayed with calcium arsenate mix-begun at this station and during ture and lead arsenate alone was in

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The Tie That Binds

the estimated experimental error city compared to lead arsenate.

(average deviation of checks from Even on Romes it will be the mean). In two cases (Rome and Winesap, 1935) the differences were in favor of the calcium arsenate mixture, but less than the error. Finally, in 1934, the difference on Romes was in favor of the lead arsenate and considerably greater than the estimated error.

In the last instance, the lower results given by the calcium arsenate mixture may be traced to two causes.

First, the experimental plot, though adjacent to its check, was very evidently in an area of heavier infestation.

Second, there was a late third brood attack upon the first less effectively protected by the calcium arsenate mixture than lead arsenate. This was believed to be due to greater loss of the calcium arsenate from weathering and fruit growth, a point supported by records of the past season which indicate that the calcium arsenate mixture was less adhesive than lead arsenate-herring oil.

Immediately following the sixth and last cover spray on Romes the average deposit on seven lead arsenate-herring oil check plots was 19.0 micrograms As2O3 per square centimeter. That on the calcium arsenatezinc sulphate-calcium hydrate was 17.6. micrograms or 7.3 per cent. less.

At harvest the checks showed 14.9 micrograms, the calcium arsenate mixture 10.7 micrograms, 28.1 per cent. less despite the fact that during the intervening five-week period there was but a single gentle rainfall. Incidentally, it appears to be more difficult to maintain a satisfactory spray deposit of any type on Romes than on the other commercially grown varieties in North Central

Favorable results

from this type of calcium arsenate mixture have been most readily obtained with varieties which are either picked early in the season (Jonathan) or which though not susceptible to late infestation are quite susceptible to first brood attack (Stayman and Winesap).

But is possible inferiority on late picked varieties susceptible to second and third brood attack seems to depend more largely upon its lack of Growers are cautioned against the cut a track through it first.

favor of the mixture and greater than | adhesiveness than upon lower toxi- | use of this mixture except for trial. |

Even on Romes it will be noted that in 1935 when the fruit was picked considerably earlier than usual, the calcium-arsenate mixture gave results which appeared quite as satisfactory as lead-arsenate-herring oil mixture, though the arsenical deposit as maintained throughout the season was no greater. In order to preserve this deposit it was necessary to use one-third more arsenical, i.e., four pounds instead of three.

Numerous arsenical analyses have shown that with the 4:1:2 calcium arsenate mixture an arsenical deposit should be obtained similar to that from lead arsenate at 3 pounds. In quality the deposit may vary from blotch to film-type, best results following heavy applications.

In considering together the problems of two-spotted mite control and codlin moth control, attention must be paid to the fact that mites are not controlled by the 4:1:2 mixture. However, it may be used immediately following sulphur sprays and is compatible with sulphur of the so-called colloidal type. If it is desired to use it in combination with mineral oil the amounts of zinc sulphate and calcium hydrate should be reduced as mentioned later.

Although on such varieties as Jonathans, Delicious and Stayman, lead arsenate commonly causes foliage injury, no injury has so far been observed from the 4:1:2 calcium arsenate mixture. Instead of all the spray materials investigated, it is the only one which has actually appeared to stimulate the trees. Although leaving a heavy white deposit, coloring of fruit has not been adversely affected. Stimulation if such it be, may result from the presence of zinc in the mixture. It is rather general knowledge that zinc is stimulative in the case of rosette, little leaf and similar disorders of a variety of plants.

Regarding residue removal which is to be fully dealt with by the divisions of horticulture and chemistry of the Experiment Station, it will be sufficient to say that the 4:1:2 calcium arsenate mixture appears to present less trouble than any other arsenical mixture so far studied.

In spite of its apparent advantages.

Reasons: 1-it may stimulate development of mites. 2-It cannot be expected to succeed where lead arsenate alone or with spreaders has failed. 3-It does not appear to be as effective in second brood attack as lead arsenate or cryolite.

Too much stress cannot be laid upon the great dissimilarity between calcium and lead arsenates. spreaders or stickers satisfactory with lead arsenate are utterly ruinous if used with the calcium compound. Because of this a complete change in spray programme — a switch from lead arsenate to calcium arsenate would be highly inadvisable. The grower should first try calcium arsenate on, let us say, about half an acre of his orchard. At the end of the season he can compare this block with the rest of his orchard sprayed the usual way and having gathered the "feel" of the new spray will be able to decide if he should effect a change the following year.

In passing, it may be noted that following directions from the Washington Experiment Station, growers at Leavenworth, Ephrata, and Chelan, as well as at Okanogan Centre, B.C., tried the 4:1:2 mixture on a small scale during 1935. The results were

ERADICATION OF BLACKBERRY.

Early Summer Spraying with Sodium Chlorate.

W HEN BLACKBERRY is well established it was established, it is difficult to bring under control, owing to the fact that the roots sucker freely. If, however, precautionary measures are adopted, and Blackberries are destroyed as soon as they appear, no very great difficulty is experienced in keeping them under control. Owing to the thorny nature of the plant, the work of "brushing" it is very un-pleasant. This can be overcome by spraying the plants with a suitable poisonous solution, and burning when they become dry. Further applica-tions of spray can then be given to destroy the young plants, or these can be hoed out. The spraying must be thorough, and where growth is dense and extensive it will be necessary to APPLE AND PEAR EXPORT.

Federal Grant £103,000.

T HE Australian Apple and receipt of notification from the Prime Minister to the effect that the Commonwealth Government has now decided to grant a bounty of 4½d. per bushel case to fruitgrowers in respect of Apples and Pears exported from Australia dur-ing 1936. The necessary Parliamentary authority to give effect to the Government's decision in this matter will be introduced during the present ses-

The Government points out that exports of Apples and Pears from the Commonwealth this year total 5,506,745 cases compared with 4,853,610 cases exported in 1935, which represents an increased export of 653,135 cases, and payments under the 1935 bounty amount to approximately £82,000, while it is estimated that the sum of £103,000 will be required to pay the bounty during the current year.

The Tasmanian State Fruit Board holds firmly to the view that this is inadequate and has made strong representations for an increased grant.

Experiments by the N.S.W. Department of Agriculture have shown sodium chlorate, at the strength of 1 lb. to 1 gallon of water, to be the The best time most effective spray. to spray is in the early Summer, when the vines are making active growth; at this stage the foliage absorbs solution easily, and the plant dies rapidly. A second application should be made about six or eight weeks later to any second growth.

When the land is suitable for sheep, young plants can be kept down by keeping a few crossbred wethers or by running goats in the paddock. Kikuyu Grass sown after burning helps to smother the suckers.

Protect Your Crops From Codlin Moth Vallo Codlin Moth Tree Bands

Certain Death to all Grubs, Weevils, etc. that attack Fruit Trees

- Band your trees in November and remove them until the following July
 - Vallo Bands are definitely effective there is no necessity to inspect or As many as 300 dead grubs have been counted from only one bandage

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9 Philip Street, Sydney

30 Albert Street, Brisbane

Pear and Cherry Slug | Kerosene Emulsion

Measures for Control.

HIS INSECT, which is found more commonly in the cooler districts, is mainly a pest of Pears and Cherries, but at times also feeds upon Plums. Quinces and the Hawthorn.

The adult is a shining black wasp or sawfly, possessing two pairs of wings and measuring about one-third of an inch in length. The females bear a saw-like ovipositor with which they slit the leaf-tissues to deposit their small, oval, flattened eggs under the epidermis. The Winter is passed in the larval, or "slug" stage in a small earthern cell beneath the surface of the soil. In the Spring these hibernating larvae enter their pupal or chrysalis stage, and during October commence to emerge as adults.

The eggs are then laid in the leaves and about two weeks later the young larvae hatch, and are present on the trees during November and December. On first hatching the larvae are almost white, but they soon become covered with a green slime-like exudation, and resemble slugs in general appearance. The larvae feed principally upon the upper surfaces of the leaves, and, when numerous, may only leave a fine network of veins. When fully fed they crawl down and enter the soil to complete their life cycle.

There are two broods during the season, and the second brood adults emerge during December and January. The larvae of the second brood are much more abundant than those of the first brood, and may defoliate the trees. Some of the larvae of this brood may remain on the trees until the approach of Winter.

The N.S.W. Department of Agriculture advises that the trees should be sprayed with arsenate of lead, using 1 lb. arsenate of lead powder to 75 gallons of water. Spraying should be carried out when the small larvae are first seen to be present on the

Where it is necessary to control the "slug" on Cherry trees, however, the spray should be applied when the fruits are very small, and this may be conveniently done at the "shuckfall" stage, when applying the aphicidal and fungicidal sprays. The lead arsenate may then be used with the nicotine sulphate-lime sulphur spray. No soap should be used in the combined spray, but instead calcium caseinate is added as a spreader.

It is inadvisable to use a lead arsenate spray on well-grown Cherries, and when control of the 'slug" has not been undertaken at the "shuckfall" stage, it would be best to apply the spray after the fruit has been picked, in order to reduce the infestation in the following Spring.



well-grown, true-from insect pests,

C. J. GOODMAN mie Point Nurseries, Bairnsdale, Victoria.

Method of Preparation.

S A GENERAL SPRAY for scale insects on citrus and deciduous fruit trees, kerosene emulsion has been largely superseded by emulsified white or red oil. It can still be recommended, however, for the control of fowl ticks, fowl mites, fleas, and other vermin. The formula is as fol-

Hard soap, ½ lb. Kerosene, 1 gallon. Water, 1 gallon.

Cut up the soap and place it in 1 gallon of water and heat until dissolved. Remove from the fire, and immediately stir in the kerosene and mix until thoroughly emulsified.

INTERSTATE CONFERENCE, ADELAIDE, OCTOBER 22-26.

The Interstate Conference of Fruitgrowers, convened by the S. Aust. Fruitgrowers' and Market Gardeners' Association, will be held at the Grosvenor Hall, North-terrace, Adelaide, from October 22 to 26. Items for dis-cussion include Orchard Tax in N.S.W.; fruit packing and horti-cultural research, Codlin Moth control, raising funds for advertising by 4d. per case excise, Section 92 of Constitution, solving present-day problems, proposed Council of Fruitgrowers' organisations. The Secretary is Mr. W. J. Kimber, Box 8X, Adelaide, from whom all details can be obtained.

For the control of thrips, ahpids, etc., add this stock solution to 18 gallons of soft water (1 pint stock to 9 pints water). For fowl ticks, fowl mites, and fleas, the stock solution should be added to 8 gallons of water (2 pints stock to 8 pints water). The stock solution may be diluted at once with cold water, but if allowed to stand until cool it must either be reheated or else hot water must be used to dilute it.

As kerosene is injurious to rubber, a warm solution of soda should be passed through the hose after using. but was taken from the market floor, junction with ordinary refrigeration,

Letters to the Editor

The Editor.

"Fruit World and Market Grower."

We have read with keen interest two articles re gas storage of fruit in the May and July, 1936, issues of your paper.

This company has been conducting tests for some considerable time, with satisfactory results. Last year a gasmaking machine and equipment were constructed, and without any refrigeration whatsoever fruit was held as follows:-

Navel Oranges days). (180 Valencias (80 days), Passionfruit (70 days), Lemons (125 days), Tomatoes (80 days).

These tests were carried out by responsible people, and as a result the Sydney Municipal Council granted this Company permission to instal an Elgin Gas Plant at the Municipal Cold Stores for further tests, which are now being conducted under the supervision of the Superintendent of Markets.

The following is a resume of these official tests.

On April 21, 1936, 40 cases of fruit were placed in the gas store chamber, comprising Apples (Jon., Granny S., Del., Londons, French Crab, and King David), Pears (Packhams, Jos., W. Nelis and Winter Cole), Passionfruit, Tomatoes, and White Sherry Grapes. Later, on April 24, 1936, Bananas were placed in the chamber, and on May 3, Romes and Batlow Jonathan Apples.

One case each of the same class of Apples, Pears, Passion Fruit, Tomatoes and Grapes was placed in the refrigeration chamber at 34 deg. to enable a comparison to be made.

The temperature of the gas storage room varied from 50 deg. to 56 deg. F. throughout the test period.

This fruit was not specially selected,

Gas Storage of Fruit | and was of good quality. The Apples were at different stages of maturity, some well colored, others green. The Pears had previously been in cold store, the Packhams for 21 days.

On May 20, 1936 (29 days) Packhams Pears were showing signs of maturity, also, in a lesser degree, all Pears, although no sign of breakdown was in evidence. All other fruit was in excellent condition.

The Grapes at this time were still in good condition-superior to those stored in the refrigeration chamber. as on removal from gas storage the Grapes retained good condition for seven days. Grapes from the refrigeration chamber were worthless within two days.

On June 9, 1936 (49 days) it was found that on removal from the refrigeration chamber, Passionfruit and Tomatoes had collapsed, whilst those stored in the gas were still in good condition. Passionfruit in the gas was of good color and firm condition; samples held their condition for 14 days (63 days). The Bananas were removed from the gas store after six weeks and sold. Passionfruit held in good condition for 80 days.

The Elgin process consists of a gas making machine, together with process tank, automatic equaliser, and dehumidifier. The atmosphere in the chamber is controlled by means of the Elgin apparatus.

For recording purposes we use a "N. & Z. Multi Point All Mains Electrical Resistance Thermometer." and of these points one is carried into the case amongst the fruit. Another on the wall for room atmosphere, and the third for a wet bulb, to determine humidity.

On reading the articles mentioned it appears that we are working on an entirely different basis from that used in other schemes in operation.

The gas used in England is that given off by the Apples stored, in con-

Black - Spot · Brown - Rot Mildews

Can definitely be controlled

BY INCLUDING

COOPER'S COLLOIDA

In Your Spray Programme =

DILUTION: 1 LB. - 50 GALLONS WATER.

It may be used in combination with most other Spraying materials if mixed according to directions. Vine growers may use it in combination with their usual Copper sprays in districts where Oidium is prevalent.

CHEAPER AND MORE EFFECTIVE THAN ANY OTHER FORM OF SULPHUR.



Sole Proprietors:

William Cooper and Nephews [Australia] Limited 4 O'CONNELL STREET, SYDNEY, N.S.W.

Victorian Distributor: F. R. MELLOR, 440 Elizabeth Street, MELBOURNE.

and the air, when a circulating fan is | used, is simply recirculated without any effort to control humidity, and soda is used to get rid of the surplus Sir,

Our tests have proved that the Elgin process is superior to ordinary refrigeration-(1) The natural flavor and appearance of the fruit is preserved: (2) there is less shrinkage; (3) there is much longer out of store life: (4) the cost of storing is 50 per cent. less than ordinary refrigeration.

Further, it has been proved that Bananas, Tomatoes and Pasionfruit can be stored in Elgin Gas with success, an achievement which has never been possible with ordinary refrigera-

We shall be pleased to arrange an inspection of our plant, through yourself, to any interested parties.-Yours, etc.,

THE ELGIN GAS CORPORATION LIMITED

> T. LEONARD CALLOW. Secretary.

56 Hunter-street, Sydney, 26/8/36.

TO DRESS TREE WOUNDS.

Appreciated Hint from Grower.

The Editor, "Fruit World and Market Grower.'

In "The Fruit World" of September is an article on treatment of "Gummosis of Citrus Trees," painting with Stockholm tar being suggested. after cutting away diseased bark. It is hard to get true Stockholm tar. and the faked article can damage a tree badly.

Have used the following method successfully, after surgical operation:-Dress first with antiseptic, using ten grains Condy's Crystals to one oz. water; when dry paint with Bordeaux Paint, made by stirring raw linseed oil gradually into Bordeaux powder until paste is formed that will spread with a brush. This is quite a good paint to use on all large wounds or cuts on trees of any sort.

Both of these formulas have been found in American papers, run on similar lines to the "F.W.".—Yours

W. E. MUSPRATT.

Littlemore, Boyne Valley Line,

AGRAL 2

The Wetter and Spreader for SHIRLAN AG, Bordeaux Mixture etc.

AGRAL 2 used in correct combination with practically every horticultural spray has been proved the best wetter and spreader yet evolved.

Write for Booklet

AGRAL 2

Distributors: RAMSAY & TREGANOWAN LIMITED,

469 Latrobe St., Melbourne, C.1. A Produce of Imperial Chemical Industries of Aust. & N.Z. Ltd.

UNAUTHORISED PUBLICITY.

The Editor, "The Fruit World."

matter which I should like to ventilate through your paper, and I am sure a number of other growers feel the same, is the number of unauthorised persons who feel it their duty to make statements through the Press, on the bad condition in which our fruit is received on "Overseas"

No doubt these statements are made with the best of intentions, and to bring home to growers the importance of maintaining the highest standard possible, when competition is so

What I think should be done is that these statements should first be summitted to the "Fruit Board," a body of men with Statutory power, and elected annually by growers themselves. These various statements would then carry more weight with fruitgrowers. I venture to say that no other industry would allow statements of a detrimental nature to be published without their sanction or knowledge. Why is it that these men do not first submit their statements to the Fruit Board? There is no possible doubt that these men have the best interest of the industry at heart, and prepared to do all they can to assist growers, and it is a poor compliment to them to see the number of statements that are published in the Press without their being consulted on a subject which is definitely their job to investigate.—Yours, etc., ERIC. SHOOBRIDGE,

Bridgewater, Tasmania.

11/8/36

PACKAGES FOR CHINA.

Marking of Packages Shipped to China.

Cargo imported into China must be marked in such a way that the Customs Authorities may be able to identify each package by its marks and numbers alone, according to a Regulation (Customs Notification No. 1527) recently forwarded to the Department of Commerce by the Australian Trade Commissioner in China (Mr. V. G. Bowden). The Regulation

oes

No. 3.

By David H. Case, B.Sc.Agr.

methods that should be used to by value any fertiliser will be valuable. of these fertilisers by the content of

All fertilisers, whether of organic plant food. Nitrogen varies con-or chemical origin, are valued on what siderably as to unit value in its difis termed their "unit value." This re-presents the actual monetary value of represents the cheapest form of nitrothe plant food contained in the fertiliser. This is worked out according to a scale which varies slightly from year to year. A good example is the one published by the Victorian Department of Agriculture in their 'Gazette" early each year. It is an excellent idea to have a copy of this, or a similar scale, to hand when buying fertiliser, as a rapid check up on the value of the mixture in question can be made. Potash is marketed only in the two forms of sulphate and muriate, and the unit value, therefore, has only two levels. In some cases, i.e., for Tomatoes and Tobacco, irrigation work, etc., it pays to use the more expensive sulphate. For most however, orcharding conditions, muriate is perfectly satisfactory. Owing to their high plant food content, both muriate and sulphate of potash have a low unit value, i.e., 5/

is to be strictly enforced as from October 12, 1936.

Each package must bear an individual number of a consecutive series. and a mark of distinctive design or a set of not less than three letters. Cargo which does not comply with these requirements will have to be remarked under Customs supervision on payment of the usual fee of \$16.00 (24/-) for 4 hours or part thereof.

Numbering of individual packages will not be insisted on (providing that the marks are sufficiently distinctive) for tinned plates and other articles intended solely for the use of the importing firm, and not intended for reexport to another open port.

Full details are obtainable from the Department of Commerce, Canberra Sydney, Melbourne, or the Deputy Director of Navigation, Brisbane.

O CONCLUDE this series of per unit for sulphate, and 4/7 articles a resume of the actual for muriate. This is obtained the retail price dividing gen, costing 11/1 per unit; organic nitrogen costs about 18/- per unit, and as nitrate of soda, 17/7. Phosphoric acid varies from 3/5 in super to 4/in organic phosphatic substances, such

> The cost of any mixture should be made up of the cost of ingredients in it, plus a charge for mixing. For instance, 2:2:1 has 8 per cent (approximately) of phosphoric acid, worth 8 x 3/5, i.e., £1/2/4; 9 per cent, of nitrogen as sulphate of ammonia, worth 9 x 11/1, i.e., £4/19/9; and 10 per cent. muriate of potash, worth 10 x 4/7, i.e., £2/5/10. The remainder of the retail price of this mixture is made up of mixing charges, storage, etc. By using a method such as this the grower can readily see what value he is getting for his money, and whether or no the added charges are excessive. He can also decide fairly accurately whether it pays to mix himself or not, as the manufacturers cost of mixing can be easily worked out.

> The writer has seen the unit value system become more used by the farmer over a period of years. It is excellent for evaluating a fertiliser, and it is noted that the farmers who habitually use it realise the worth of their mixtures more than those who do not. In most cases a highly concentrated fertiliser is cheaper and better buying (per unit) than an oldfashioned, badly-balanced mixture containing a high percentage of phosphoric acid. The writer has observed that where the system is practised the quack fertiliser salesman is forced out, as the farmer can quickly work out the actual value of the material offered him. This benefits the farmer and more than benefits the legitimate manufacturer.



CITRUS NEWS & NOTES

PRUNE CITRUS TREES NOW

Advises R. L. PREST, Queensland Instructor

ties of citrus has been completed, pruning may now be commenced. With citrus, the pruning requirements of each tree are dictated by various factors, including the tree itself, the soil, and cultural conditions.

In the younger orchards, where well developed frameworks have been maintained, the pruning of the trees during their first years of bearing should be directed towards the removal of suckers and decadent firstfruiting shoots. Where pruning operations have been diligently carried out on young trees, they require very little pruning during several following years, although they should be gone through annually to remove suckers and dead wood.

In many of old older, but well-caredfor orchards there is a lack of vigorhealthy fruiting wood. condition points to the necessity for a periodical renewal of the fruiting wood, which can best be accomplished by thinning out, and at the same time shortening back terminal growths and twigs. The cuts should be made right back to strong new growths, removing weak shoots and those that have borne fruit. The thinning leaves space for the necessary subdivision, whilst the shortening back tends to force into growth dormant buds from behind, and at the same time stops the excessive growth of branches, and renews supplies of fruiting wood. Where crowding is evident, the removal of entire branches is at times desirable. The entry of plenty of light and air assists the growth from behind the outside ring of foliage of healthy and vigorous shoots, which make new fruiting wood. Any excessive growth of suckers or water sprouts arising well inside the tree as a result of heavy pruning require to be cut away, or they will absorb much of the vigor of the tree and crowd the centre.

In older trees, where vitality has been impaired, provision will require to be made for the renewal of old. crowded, and decadent limbs. In such instances pruning is of a much heavier nature necessitating the removal of entire branches. Such branches should be cut right back to their source of origin, so that the sap will be readily diverted to the remaining limbs and encourage the formation of new fruiting wood. Under no circumstances whatever should stubbing be resorted to. In instances where it is necessary to replace the larger limbs, the work requires to be done gradually over two or more years in order to avoid excessive suckering.

Lower branches of trees should not be allowed to touch the ground, as

In the warmer districts, where the fruit borne on such branches is geneharvesting of Navels and early varie- rally blemished and of poor quality. On the other hand, trees should not be pruned too high from the ground. The height to which they should be lifted varies according to circumstances, but in most instances knee-hight will prove to be satisfactory.

AMERICA ARRANGES TRADE AGREEMENTS.

Citrus Exports will Benefit.

Reports from New York state that reciprocal trade agreements have been concluded by which various foreign foreign countries will accept more citrus fruits from America. Sweden has abolished tariff duties on Grapefruit and Oranges, and eight other countries have given direct concessions on fresh Grapefruit by as much as 50 per cent. cuts in duty.

Concessions for Orange exporters have been made by Canada, Guatemala, Columbia and France. It is anticipated that these agreements will go a long way towards re-establishing export volume comparable to that of 1929, when the total value of exports amounted to 19 million dollars.

Other countries have similarly extended big reductions on both fresh and canned fruits, and have opened avenues for American exports that have, until recently, been relatively closed.

CROSS-BREED LEMON

It is reported from Florida (U.S.A.) that a citrus grower in that State has succeeded in crossing the Mexican Lime and a Lemon, and producing a new citrus fruit that resembles the lemon, but resists several diseases common to that fruit.

CITRUS ROUND THE WORLD.

Interesting News from Abroad.

South Africa.-A satisfactory citrus crop is expected this year, according to a report from the Pretoria Citrus Exchange. Export of 300,000 boxes more than last year is expected to bring the total export up to 23 million

Mediterranean.—From present indications, it is estimated that more Oranges and Mandarins will be available for European markets from Mediterranean-bordering countries this year than for several seasons past. The only area likely to show a decrease in production is Algeria. Spain would have had an exceptional crop had not internal troubles developed. Now it is doubtful if she will export any citrus at all.

Italy will have an increased crop, and, now that sanctions have been removed, will try to export all that she can to Central Europe.

Palestine.-So great has been the development of the citrus industry in Palestine that it is hard to keep track upon her exports, but it is certain that she will have an increased crop.

California.—The Californian citrus crop is estimated to be 25 per cent. lower this season than last year.

Brazil.-Owing to citrus growers in Brazil not being properly organised, it is difficult to get dependable figures, but latest information to hand suggests that the crop will not exceed that of 1935.

U.S.A. — The policy of the U.S. Government in conducting negotiations with European countries for reciprocal trade is already bearing results, and citrus exports will benefit acordingly. France has extended concessions covering Oranges and Grapefruit. U.S.A. is offered the following quotas of total imports into France, by quarters:—0.29, 0.16, 8.59, and 1.65 per cent. respectively. In addition, a reduction of duty on Grapefruit, not included in quota quantities, has been approved. It is expected that this will have the effect of increasing Grapefruit imports from U.S.A.

Germany .- Oranges are one of the three fruits that show an increase in the April report of German imports. For that month the imports rose to 67.764 tons, as against 54.584 tons in the same month last year. Spain secured the largest share of this volume by exporting 48,000 tons. Italy provided 5,000 tons, and Palestine 700

Yugo-Slavia.—An allotment of 3,000 tons of Spanish citrus into Yugo-Slavia was practically filled before the recent civil war broke out. It is expected that Yugo-Slavia will have to look elsewhere for her imports during the coming season.

Scandinavia.—Norway increased her imports of citrus fruits in the first quarter of 1936 by 5 per cent., to 8,960 tons. Finland also increased her smaller receipts to 3,853. Sweden also raised her imports by 5 per cent. to 21,507 tons. Recognising the value of fruit in the diet of her people, Finland has lowered the duty on all foodstuffs not produced in that country. Oranges have been reduced from cent to 1 cent per lb.

England.—The 1936 Imperial Fruit Show, to be held in Liverpool from October 30 to November 7, will include classes for Oranges, Lemons and Grapefruit drawn from commercial consignments landed in England, although, owing to the export season having then closed, the judging was done last July.

The trend of world Orange production is definitely upward, says the U.S. Bureau of Agricultural Economics. Crops are increasing rapidly in U.S.A., Brazil, Palestine, and South Africa. A total world production of 180,000,000 boxes in now the accepted estimate, of which U.S.A. supplies approximately 30 per cent.

Sailors Don't Care!

The dear old lady stood on the cliff watching the revolving beacon on the lighthouse. "How very patient those sailors are!" she exclaimed. "The wind has blown out that light a dozen times at least, and they still keep on lighting it again."

== "SPREGAN"== Colloidal Liquid Sulphur

For efficacious treatment of BLACK SPOT, BROWN ROT, DOWNY MILDEW, OIDIUM, and all Fungus Diseases for which Sulphur in any form may be used as a control.

SAFE - - - Because it Prevents Leaf Scorch.

CERTAIN - Because it gives definite control of Fungus Diseases.

ECONOMICAL Because it ensures maximum results at less cost than other forms of Sulphurs

As a Precautionary Spray, 1 lb. of "SPREGAN" to 100 gallons of water. As a Combatant Spray, 2 lb. of "SPREGAN" to 100 gallons of water.

Manufacturers COLLOIDAL SULPHUR PTY. LTD.

Wholesale and Retail Depot - - 466 Swanston Street, Carlton, N.3, Victoria.

Gerrard Sales and Service

GERRARD

The customer is always right when he gives a clean acceptance receipt for cased goods wire-seal strapped for safe transport with GERRARD.

GERRARD The Tie That Binds



Wisdom Debated in California.

HE QUESTION as to whether, in the interests of growers, it is wise to add Orange juice to the varieties of canned goods, is being widely debated in California. Some say that the long and consistent publicity which has been necessary to educate the public up to a reasonable and satisfactory consumption of fresh Oranges may be nullified by the introduction of Orange juice in cans. Others contend that it will stimulate the consumption of fresh Oranges by making the public demand more and more Orange juice in both fresh and canned form.

Valencia growers hold that canning will be another outlet for their increasing production and make possible the use of by-products not now utilised. Growers, in California, claim that as other Orange districts are already canning the juice, they must also do so to keep in the market. So the debate goes on.

The canning of Orange juice is not an immediate innovation, however, for season California converted 27,000 tons of Oranges into canned juice. It is pointed out also that a proportion of the Orange crop, not altogether satisfactory for sale as fresh fruit, can thus be utilised for pressing and canning so that growers may capitalise upon fruit that has been a dead loss up to date.

Whilst it is admitted that Valencias are suitable for canned Orange juice, up to now it has seemed impossible to use Navels for that purpose, but the laboratories are at work on the problem, and it is anticipated that Navels too will be found satisfactory for canned Orange juice.

The doubt is raised of the ability of canners to pay a high enough price for "juice fruit" to give grow-place they had seven small children."

Canning Orange Juice ers a reasonable return, and yet to be able to compete with Tomato and other fruit juices already well established on the American market, and this would seem to be the crux of the controversy as to the wisdom or otherwise of canning Orange juice in commercial quantities.

As indicating the sale that would await the distribution of Orange juice in cans through recognised channels. it is pointed out that canned Tomato juice, which in 1929 represented a turnover of only 185,000 cases, in 1935 represented the consumption of over 8 million cases, and that canned Pineapple juice increased from 700,000 cases in 1933 to 2½ million cases in 1935, or 257 per cent. increase in only two years. At present canned juices can be obtained in U.S.A. in Orange, Grapefruit, Prune, Loganberry and

AND NOW-CANNED FROGS.

Australians to Experiment.

The "Frog Leg" delicacy so well known in France and in some parts of America, will shortly invade Australia if the plans of two young men in Euroa (Vic.) mature. Messrs. H. Wilson and S. Jacka recently constructed three large ponds in which to breed a type of large frog said to be suitable for canning. They ordered a shipment of breeding frogs from an American Frog Canning Co., but only one frog survived the trip. They now plan to order another shipment in the belief that this unusual canned commodity will find favor with Australian epicures. In the meantime the sole survivor is croaking his mournful melody in loneliness.

Farmer: "Do you know anything about threshing?"

New Maid: "Rather—in my last

CANNED ASPARAGUS.

New Factory in Australia.

LTHOUGH America has canned Asparagus successfully for many years and has developed ready trade for this delicacy, the canning of Asparagus has been postponed in Australia for "a more convenient season." That this season has now arrived is evidenced by the registration of a company to be known as the Drysdale Asparagus Co. Pty. Ltd., and a factory has been erected to process Asparagus for the Australian market.

That Drysdale can grow an Asparagus which compares favorably with that grown in any other part of the world, has been proved, and very soon the Australian public will be able to enjoy Asparagus that has not had to be imported. The factory is located at Drysdale, and will be conveniently accessible to growers whilst the marketing has been entrusted to Henry Williams and Sons Pty. Ltd., the well-known canners of Heidelberg, Melbourne.

She (a lover of animals): "Ah, what would polo be without dashing ponies?"

He (sadly): "Hockey."

CANNED FRUITS.

Included at Imperial Fruit Show.

A section for canned fruits has again been provided in the 1936 Imperial Fruit Show, which will be held at Liverpool (Eng.) from October 30 to November 7. Samples for competition may be drawn from stocks already in Great Britain or from special exhibits forwarded for the show.

CANNED FRUITS AT THE "ROYAL."

Although not a large exhibit, much interest was accorded to the display of canned fruits in the Government Pavilion. Nicely arranged, the pleasing labelling was attractively displayed, and much good publicity was made to the throngs of visitors who passed through the pavilion.

Bottled fruits and vegetables were again in striking evidence, several specimens were illuminated with electrict light, and caught the eye of housewives. As an educational and publicity move, these displays at Victoria's Premier Show are to be commended.

EXPORTS TO AUGUST 31.

The following table shows exports of canned fruits from Australia from the commencement of the 1936 season (January 1) to August 31. The figures quoted represent dozens of 30 oz. tins, or equivalent:-

| NUMBER OF THE PARTY OF | | | | Fruit | Pine- | |
|------------------------|----------|----------|---------|--------|---------|-----------|
| Country | pricots. | Peaches. | Pears. | Salad. | apples. | Total. |
| U.K | 249,798 | 832,134 | 642,638 | 100 | 4,675 | 1,729,245 |
| N.Z | 13,770 | 14,102 | 1,158 | - | 3,516 | 32,546 |
| Canada | 16,220 | 112,949 | 14,050 | 6,090 | | 149,309 |
| East | 4,420 | 11,274 | 8,518 | 1,364 | 96 | 25,672 |
| Misc | 898 | 1,820 | 2,774 | 52 | 436, | 5,980 |
| Total | 285,106 | 972,279 | 669,138 | 7,506 | 8,723 | 1,942,752 |

ANT BRAND S D Use "ELEPHANT" Brand Arsenate of Lead-Quality Stands Alone.

Insist Upon it!

FRUIT GROWERS generally have come to depend on "Ele-phant" Brand Sprays. They find them abso-lutely reliable, efficient and of guaranteed and quality.

We can supply all your Spray Requirements—ARSENATE OF LEAD (Paste or Powder), SPRAY SPREADER, SPECIAL COPPER MIXTURE, LIME SULPHUR, WHITE OIL, MIGOTINE SULPHATE, RED OIL, ELG.

Extract "BETTER FRUIT," U.S.A., February, 1934: "Idaho Spray Programme for Codlin Moth Control, 1934," by Dr. Claude Wakeland, Department of Entomology, University of Idaho. Experiments in the State for the past six years have shown that LEAD ARSENATE is the best, as well as the most economical insecticide that we have tested for Codlin Moth control. Entomologists are agreed that there is no substitute for Lead Arsenate that can be recommended to the public.

LTD., JAQUES PTY.

Are Actual Manufacturers and Distributors of "ELEPHANT" Brand Sprays.

City Office: 31 Queen St., Melbourne. Telephone: Cent. 756

INTERSTATE AGENTS:

N.S.W.—Producers' Distributing Society Ltd., Valentine and Quay Streets, Sydney.

Q'Id.—Buzacott's Ltd., Adelaide Street, Brisbane.

S.A.—Silbert, Sharp & Bishop Ltd., Rundle St. E., Adelaide.

INTERSTATE AGENTS:

W.A.—Westralian Farmers' Ltd., 569 Wellington St., Perth. Tas.—R. Nettlefold Pty., Hobart, Bell & Gerrard, Launcette.

C.S.D.—Pizzey, McInnes Ltd., Box 1114, G.P.O., Auckland.

The Australian Apple Industry

PRESENT-DAY PROBLEMS AND PROSPECTS DISCUSSED

The Average Production of 10,000,000 Bushels Likely to be Increased by 20 Per Cent.

Because of Young Areas Yet to Come Into Bearing — Urgent Need for Organising the
Local Marketing of Apples — Present Public Consumption Only Two Apples Per Head
Per Week — Immense Possibilities in Advertising.

By Geoffrey W. Brown, President, Victorian Fruit Marketing Association, and H. W. Soothill, A.I.C.A. (Producers' Markets' Co-operative Ltd., Perth).

the first instalment of the comprehensive articles by G. W. Brown and H. W. Soothill, on the Australian Apple industry. We are in recept of appreciation from readers for the past instalment, and now publish hereunder the balance of the article. The September instalment surveyed the situation as regards costs and prices, the average production of 10,000,000 bushels of Apples in Australia, the export markets, with their definite limitations, competition abroad from foreign fruit. Empire conferences, the setting up of an Empire Apple and Pear Organisation. The article is now continued thus:-

S O FAR AS THE MARKETING of Australian Continent is concerned, great hopes were entertained on the account improving demand evidenced in many European countries some years Unfortunately, the various difficulties confronting the countries concerned, coupled with the steps taken by those countries to protect their own position, have been responsible for very severe limitations indeed of the total quantity of Apples which can be absorbed in those directions.

The two biggest Continental markets have been Germany and Scandinavia, and very vigorous attempts have been made to develop the trade in both these countries, and through those countries to other regions where any promise at all of success could be found. The actual experience of recent years, however, has been that, apart from Scandinavia, they show little prospect of expansion for some time to come.

Whatever outlets may be secured in the United Kingdom and on the Continent, it is apparent that new competition of a serious nature must be expected from the Argentine; many reports of the establishment of Applegrowing there are such as to give cause for real anxiety.

Eastern Trade Limited.

view of the situation of Europe, it follows that the industry has been very much concerned in endeavouring to find further export outlets in other countries. There has been for quite a long time a limited trade done with the Straits Settlements and the East Indies, and several definite surveys have been taken of the possibilities of expansion of those markets, and also of the possibilities of opening up additional outlets in various countries, particularly in Asia.

Some quantities have been absorb-

ed by South Africa, but the Union has now become a competitive exporter of Apples to the United Kingdom. Small outlets have also been secured in Northern Africa and Palestine.

The appointment by the Federal Government of Trade Commissioners will, it is hoped, do much to assist in some of these directions, but at the same time, undue optimism in relation to the capacity of these "outside"

N OUR LAST ISSUE we published | markets does not appear to have any reasonable toundation.

It must be recognised that the Australian product is quite costly by the time it reacnes its destination, and that in most cases the native population cannot be looked to for any significant demand in the countries of Asia.

It is certainly to be hoped that further expansion may be achieved, but the figures of recent years, coupled with the information available in relation to prospects, are such as to justify the conclusion that under existing conditions these markets can be looked to only for a relatively small measure of alleviation of the apparent surplus.

Some useful relief might be expected in certain countries could trade restrictions be released, but the oneway traffic tendency of the Australian fiscal outlook gives little hope of restoration of markets lost on these grounds.

Whatever development may be secured in any market, it is the approved policy that quality shall be required for purpose of export, no matter what the destination. The same regulations as are applicable in relation to export to the United Kingdom have been applicable for all destinations. For the past season, slight variations have been made in the regulations covering some other destinations, in order to permit of the various types of demand being met more easily. The definite intention is to maintain the policy of ensuring that all Apples reaching export markets shall, so far as possible, arrive in such order as will ensure the confidence of the pur-

The remaining outlet is, of course, the home market here in Australia. This presents problems of a very different character indeed, and perhaps we should pause to turn our minds from this export situation before endeavouring to study the home market conditions.

(A) Production Features.

UR examination of the production and export conditions of the Australian Apple industry will have made it clear that in at least one respect the home market problem differs from that in several other Australian primary producing industries, which export a portion of their com-

Many other industries have sought to export such a proportion of total production as to permit of maintaining a home consumption price in excess of world's parity.

With the Apple industry, the restricted outlook abroad has prevented the adoption of a similar policy, even had the industry been willing to adopt such a course, which is improbable.

Whilst it is difficult to generalise, in view of the difference of varieties, and of the conditions in various States, it can safely be said that on the

has been below export returns over the last few years—this despite the greatly reduced export parity. This, of course, is a somewhat natural result of the restriction of quantities exported, especially in combination both with restricted home consumption, arising from difficult economic conditions, and a tendency towards expanding production.

We have already seen that average production over recent years exceeds 10,000,000 cases per annum, and that somewhat less than 5,000,000 cases of this total are exported. With an Australian population of over 6,000,000 people, home consumption in the vicinity of a little over 5,000,000 cases per annum does not seem exceptional. It is, however, not possible to arrive at the actual consumption, except as the difference between production and export figures necessarily includes a proportion of wastage, and in face of the prices of to-day it is known that wastage on the orchards constitutes a very much higher percentage than formerly, growers finding it frequently unprofitable to pack for sale a proportion of the crop.

Another 2,000,000 Bushels.

This position in itself is quite serious enough, but an examination of statistics of plantings reveals the rather disturbing fact that areas planted and not yet in bearing represent over 20 per cent. of the areas now bearing.

Even if the new areas bear only as vigorously as the average of the older trees, it is only logical to

Anticipate an Increase

of at least 2,000,000 bushels, i.e., from, say, over 10,000,000 to over 12,000,000 per annum for marketing either here or abroad. Since it has been demonstrated that significant expansion of overseas outlets cannot be anticipated, a much greater problem than that already experienced is obviously bound to arise in the near future unless further remedies are applied.

Actually, the expansion of production will probably exceed this expectation. Not only are the newer areas likely, by virtue of their age, to bear more vigorously than the average of older plantings, but most of them are planted to much more prolific varieties than those established years ago; additionally, there are substantial areas of trees which at the moment are not bearing because they are the subject of grafting from unsuitable varieties to more popular types, but which, within a short period, will return to create an increase in total yield.

It is unfortunate that earlier surveys of this position were not made widely known, and that the facts outlined above are even to-day not generally recognised, even by the Apple growers themselves.

It is obvious that if a better attempt had been made to relate increased plantings to probable expansion of out-

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WEEDING **EQUIPMENT**

Rain and warm weather mean weeds aplenty, and every weed takes value away in moisture, nutriment, development, and profit. It is wise, and easier, to kill these soil-robbers early, and the right implement for the purpose can be selected from the Sunshine weeding equipment for farms, orchards, market gardens, etc., at moderate prices, and on liberal terms. Catalogue—free on request—describes the complete line.

Massey Harris Spring Tyne Cultivator



Light but strong, durable, and ir a convenient size with low wheels, for work close to trees, vines, berry bushes and general use in orchards, vineyards, small farms, market gardens, etc. The teethset in three rows for easy clearace of rubbish—work under powerful pressure, and will penetrate hard soil. They cut and tear the roots of weeds, thistles, etc. and drag them to the surface to be destroyed; also break clods, and leave the soil in the right condition to conserve moisture and plant food. The easy-to-reach lever applies the pressure to the teeth when cultivating; also lifts them clear of the ground for transportation.

9-tyne, with pole, 2-horse trees and neck-yoke, £12/15/-.

13-tyne, with pole, 2-horse trees and neck yolk, £14/15/-.

9-type, with forecarriage, £14/15/-.
13 - Type, with forecarriage, £16/15/-.

Full Details in the MASSEY HARRIS ORCHARD CULTIVA TOR LEAFLET—Free on Request

Satellite No. 7, 5-Tyne Cultivator and Weeder



An effective, all-steel, light-draught scuffler-cultivator for weeding, hoeing-up, and creating a suitable tilth to retard evaporation of moisture, in plantations, market gardens, etc. The five fluted tynes are strong and durable; mouldboard hillers swivel round for use to cut away or mould up; levers act instantly—front to regulate depth, rear to control width of cut—from 17 to 27 inches; handles adjustable theight of user.

With two 3-inch points, one 7-inch shovel point, right and let hillers, three extra 3-inch points, and a combination spanner, 23/5/-. Other Styles—equally good valu—are shown in the SATELLITE FOLDER—Free on Request.

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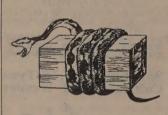
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sent position could have been avoided. It is, however, very surprising indeed to find that even to-day in some parts of Australia, Apple planting is still proceeding fairly vigorously. To some extent, of course, this arises because of consideration of State interests, as distinct from those of the industry

viewed as an All-Australian industry. Tasmania Biggest Producer.

In relation to the various States, by far the greatest measure of production is centred in Tasmania, which grows approximately half of the total Australian production. Next in order of production comes Victoria, with New South Wales, Western Australia, and South Australia producing somewhat similar totals on average during the last few years; Queensland is

only a small producer.

Naturally the heaviest quantities are exported from Tasmania, with Victoria and Western Australia averaging approximately equal totals, followed by South Australia, and then New South Wales, with smaller lots from Queensland.

Considerations of density of population in the various States have obviously a very big bearing upon the question of the proportions for export and local consumption.

For instance, Western Australia, having only a very limited population, and no practical opportunity, under present conditions, of marketing any proportion of her crop in the Eastern States, is likely to require a bigger proportion of export relatively to her production than that of other States

Although South Australia's cropping is irregular, the bulk of the unexported quantity grown in that State is absorbed for local consumption within the State itself; much the same can be said of the State of Victoria, although Victoria receives some fruit from neighbouring States, particularly Tasmania, and markets some quantities in New South Wales.

Although New South Wales exports a proportion of her production, her consumption is very substantial in relation to production within her own borders, and consequently she imports a much greater quantity than she sends abroad.

Queensland is a small exporter of some early maturing varieties, but in the main is a consumer of Apples produced in other States. The Tasmanian local market is, of course, negligible, and Tasmania has always looked to the neighbouring Eastern States, par-ticularly New South Wales and Queensland, as her "home" market. (B) A Further Look Ahead.

In face of these conditions, the industry is recognising the absolute necessity for very special efforts to cope with this phase of the problem. The general approach is that, although better returns are desirable in very many instances, the major object should be rather to

Ensure Increased Consumption, which will permit of absorption of a better proportion of the balance of the crop remaining in Australia. Two or three phases have suggested themselves for action in this regard.

Since a proportion of the crop in wastage has to be discarded under present conditions, it is likely to be preferred that such proportion should be the least attractive of the fruit. Whilst it might be assumed that such will naturally be the case by virtue of economic considerations, experience shows that the creation and enforce- paratively insignificant up to date;

lets, much of the difficulty of the pre- | ment of quality standards is actually necessary to ensure that only better class of fruit is marketed.

> Growers' organisations in the various States have been very active in representing this point of view, and regulations have been brought into force in most of the States; growers are, however, seeking that the standards be raised, and that much fuller measures of enforcement of these regulations be applied, in order that they may be rendered effective. After all, the industry has to recognise that it has a duty to itself and to the public, in providing an attractive and reliable article for consumption. Not only so, but sales of inferior lines tend definitely to reduce the demand. In some quarters it is suggested that the elimination of inferior fruit from presentation on the Australian market will, by virtue of its total quantity, also have a beneficial effect in reducing the apparent surplus.

Consumption Two Apples per Week.

One very obvious point for attention is that of public demand. If we assume that the average bushel case of Apples contains approximately one gross, it will be apparent that the average per capita consumption for Australia approximates only about two Apples per week.

This is indeed surprising!

It has been thought that the value of Apples has been fairly well recognised for some time past from a health standpoint; apparently much more extensive appreciation of this aspect has to be developed. This low proportion of consumption is even more surprising in view of the fact that, unlike many other fruits, Apples are normally used both for culinary and for dessert purposes.

Furthermore, the development of modern efficient storing methods has permitted of spreading the marketing of the crop, and throughout the whole twelve months of the year the public has Apples readily available

Whilst no one with a knowledge of the industry will overlook the more or less inevitable spread of costs between the grower and the consumer, it is certain that low consumption cannot to-day be defended upon grounds of high retail cost. If comparisons are made with other foods, on a basis of cost per pound to the housewife (for instance, meat, butter, tea, cheese, milk), it will be agreed that the average cost of Apples is decidedly below that of the average cost of the household larder. At the same time, it is not to be expected that the public are likely to recognise aspects of this character either from the standpoint of the grower, or from their own point of view, unless special steps are taken to bring these features under notice.

It is from this point of view that the industry must take at least some steps to seek a remedy for a part of its problems, by an attempt to ensure the co-operation of the Australian housewife.

Other remedies are constantly being sought, and disposal of a proportion of the crop in the form of

Various By-Products

excess of that of ordinary inevitable has been, and is, being attempted. There is more recognition of the value of ordinary Apple juice as a beverage.

Some small proportion of production is absorbed in the manufacture of cider, and it is indeed surprising that the Australian consumption of this delightful beverage has been so comnot generally featured by licensed preservation and development. houses, although non-alcoholic ciders are also available. Various other methods of treatment and of preservation are a subject either of some small activity or of experiment—drying and canning being two of the avenues con-

It may seem anomalous, but it is undoubtedly true that the organisation of the industry in respect of local marketing is by no means as complete as that in respect of export.

The main reason for this state of affairs is probably the substantial difficulty of watching the local market position, especially from such angles as that of inspection of the fruit, in view of the tremendous number and variety of channels through which the fruit passes on its way to so very many eventual points of consumption in shops, and so forth throughout the whole of the Commonwealth.

In respect of export, the fact that the quantities to be shipped are necessarily concentrated eventually through a limited number of ports, and thus can be, and are, made the subject of Commonwealth inspection, has done a very great deal to facilitate the organisation of the export side of the industry.

At the same time, a very big body of growers' opinion has come to recognise the tremendous importance of the more effective organisation of the local market aspects, and their views in these directions have received a very substantial measure of 'support from sections of the wholesale trade which have shown a willingness to cooperate in appreciation of the seriousness of the problem.

So much for the Australian marketing difficulties.

Conclusion.

This glance, which we have had at the Australian Apple industry reveals something of the attempts made towards a solution of the problem. Perhaps it is not too much to hope that a wider recognition of these various phases may help in the further attempts which are to be put in hand in these interesting and rather splendid endeavours to create real pro-

this may be due to the fact that it is lish its present outlook and its future

For the remaining problems lined it would be unreasonable to anticipate that any one remedy is likely to meet with any measure of success. It does seem, however, that if the industry will recognise the whole of the factors involved,

A Combination of Remedies

is likely to lead to reach achievement. and perhaps first amongst such remedies one should place these points:-

A restriction of further plantings at least until adjustment of the present position has been secured, and some expansion of outlets can be ensured or foreseen.

The establishment (where neces sary) of quality regulations for really standards of presentation, and the effective enforcement thereof. As related to this, more attention might well be given to the elimination of unattractive varieties, the sale of which, even on the home market, does not assist to popularise Apples.

Public co-operation in increased consumption to be ensured by creating a wider recognition of the dual benefits which can thus be conferred upon the consuming public, and upon the industry itself, as well as upon the very many callings allied with it.

continued investigation of the possibilities of expansion of consumption in by-products.

Concurrently with these efforts there will, of course, be a continuation of the vigorous pursuit of any possibilities of expansion of overseas outlets. Really reciprocal trade arrangements could assist substantially in this respect.

Fortunately, the situation has not developed to such a stage as to lead to any assumption that the problems are insuperable. They do, however, require recognition, deep consideration, and active and organised attention. Even the very difficulties will have compensations if they lead to progress along these lines in place of the isolation of viewpoint and the absence of an All-Australian outlook, which has, to a large extent, been responsible for the existence of such gress in this industry, and so establi problems as have now to be met.

VICTORIA

Melbourne Royal Show

EXCELLENT FRUIT EXHIBITS

IGH QUALITY FRUIT was on view in the new Centenary Hall at the Royal Agricultural Society's Show, Melbourne, at the end of September. Considerable public interest was displayed.

Apples and Pears.

In the Apple and Pear section the dish and tray classes were notable for the firm, even quality of the fruits. The Pear entries showed a marked increase over those of other years, and more than 90 per cent. of which were from the Thiele family. The exhibits were of choice quality. W. A. Thiele displayed excellent fruit of different varieties, and won in many sections, including the award for the best case of Pears suitable for export, with Winter Nelis. The winning 12 fruits of Doyonne du Comice, by F. E. Thiele were of exceptional merit.

Mr. C. A. Bertuch, of Harcourt, secured many awards in the Apple section with first-rate specimens. In winning the prize for 12 Granny Smith Apples (23-in.), August Thiele received commendation for meritorious effort. For four varieties of culinary Apples, four of each, P. May won, with Stewart's Seedling, Granny Smith, Reinette de Canada, and London Pippin.

Mr. J. D. Grant won with best six commercial varieties for export, the second prize going to C. A. Bertuch, and the third to W. D. Whicker.

For the Orient export competition there were several competitors. Four cases, two each of two distinct varieties, are required. Two cases go to London to be judged there, and two are held for judging at the Show. The result of the judging on the two cases here was:-R. A. Bailey, first (96 points), G. G. Cole and second (90 points); H. C. Wright, third (81 points). The Orchardists' Cool Stores Co. Ltd. won the Governor-General's shield and perpetual challenge shield for a collection of Apples,

eight varieties, to be grown within 15 miles of local post office. The second award went to Messrs. Grant and Founing.

Of particular interest both from the spectacular and technical viewpoints was the Apple packing competition by school children attending the packing classes conducted by the Department of Agriculture. The Pakennam School came first, Harcourt North second. The judge, Mr. J. M. Ward, spoke in terms of highest appreciation both as regards the fruit and the packing.

Among individual packers, Thelma Black was first, Marjorie Black second, and Jean Bertuch third. Highly commended awards went to George Leversha (South Ravenswood), Bonnie Dunning (Pakenham), Joan Warren (Harcourt), Jean Bertuch (Harcourt North), J. McDonald (Fryerstown), L. Portwine (Barker's Creek), D. Dennett (Somerville), A. Cole (Lower Tyabb), G. Shaw (Upper Tyabb), M. Handasyde (Wantirna), C. Crittendon (East Burwood).

Citrus Fruits.

In the Citrus section the fruit was of pleasing quality. Instead of the pyramid displays of previous years, the staging was altered to constitute a section for packed cases. In the six entries of five cases each, the fruit was displayed thus, revealing the even high quality. Awards were:-(1) Irymple Packing Pty. Ltd. (971 points); (2) Wood, Son and Seary Ltd. (931 pts.); (3) Mildura Co-op. The judge, Mr. J. L. Provan, expressed keen pleasure at the quality of the fruit displayed, and the excellence of the packing.

So keen was the competition in the export section (for four cases of citrus fruits kept in cool store for five weeks) that on the first count there was a tie, necessitating re-judging. Finallly the awards were placed as follows:-(1) Berri Co-operative Packing Union Ltd., 94½ points; (2) Mildura Co-operative Fruit Co. Ltd., 94 points; (3) Irymple Packing Pty. Ltd., 931 points. The exhibit by Messrs. Wood, Son, Seary Ltd. was highly commended.

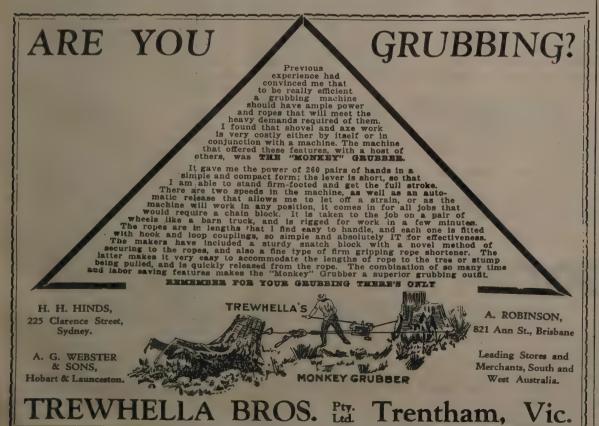
Prize-winners in the Apple and Pear sections (other than those already mentioned) were:-Messrs. W. F. Boe, A. J. Upton, L. I. Hobbs and J. F. Thiele. Citrus:—Curlwaa Co-Op., T. A. Lornie, L. A. P. Webb. The Curlwaa Co.-Op. came first with exhibits of Washington Navel, Late Meditterranean Sweet, Valencia, White Queen, Toppa; and L. A. P. Webb won with cured Lemons, and secured other prizes.

ROYAL SHOW EXHIBITS.

Apart from the displays of dried, canned, deciduous, citrus and other fruits, there were many interesting displays of implements, packing equipment and other orchard requirements demonstrated on the stands of various firms catering for these products. A short review of some of these stands is given hereunder.

The caterpillar tractors which were

displayed at the stand of Wm. Adams and Co. Ltd. were closely inspected by many orchardists. A feature of this tractor is its ability to allow close working to trees, short turns, and ample power for hilly country. The caterpillar can handle with ease the



"A Masterpiece of Design and Construction"

The Unanimous Opinion of All Fruitgrowers who have Inspected and used this

Modern Portable Spray Cart

Equipped with:

The famous "Rosebery" 2 h.p. Vertical, totally enclosed, self-lubricating, heavy - duty type petrol-kerosene engine; and "Rosebery" Fig. 450, totally enclosed twin -cylinder self-lubricating spray pump.

Special Features:

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most economical because of the fact that low-grade traction fuel or kerosene is used for running.

The Atlantic Union Oil Company exhibited white spraying oil, Bordeaux Spreader, and Emulsified White Oil. in addition to calling attention to Union kerosene for lamps, cooking, and general heating.

Chevrolet Trucks, which have found much favor in recent years with fruitgrowers and market gardeners, were displayed at the Royal Show. complete range of recent models was

Gerrard Wire Tying Machines Co. Pty. Ltd., in addition to giving fruit packing demonstrations, exhibited a complete range of the firm's wire tying machines. Machines are available for properly reinforcing and sealing all sizes and weights of packages, cases, cartons, crates, or bundles.

D. Harvey: Working models of Harvey fruit graders and processing equipment. Packing house equipment included — sorting tables, Pear cannery, Tomato, Passionfruit and

attachment of any cultivator, disc citrus graders, dehydrators, citrus etc. This outfit comprises a 2 h.p. plough, scarifier or rotary hoe. It is washing and sterilising plants, the "Sundial" engine, spray pump conwashing and sterilising plants, the "Sundial" engine, spray pump con-Harvey Hydrochloric Acid Washer for nected to engine by gear drive, with removing arsenate of lead from Pears and Apples. In the implement section of his exhibit were included a full range of all types of ploughs and cultivators, outstanding implements being the Harvey Power Lift tractor plough and the Petty Wonder plough. The Beetle Back citrus cultivator was a line of particular interest to citrus growers.

> Howard Rotary Hoe: At this stand a full range of the types of cultivators handled by this company was seen. The balloon tyres which were added to the traction model cultivators last season were a feature. The trailer attachment to these cultivators allows them to be used for hauling purposes. In the mobile class were seen both Junior and No. 12 Rotaries.

The International Harvester Company showed their usual comprehensive range of cultivators, ploughs, power implements and orchard ma-The McCormick-Deering power spray plant was also demonstrated. The march of mechanical power on the orchard and farm was shown by the range of McCormick-Deering tractors. These are available from 9 horse power up to 27 h.p.

Victor Leggo and Farmers Ltd. exhibited all kinds of spraying materials, including arsenate of lead, concentrated lime sulphur, nicotine sulphate, spraying oils, "Home-Made" Bordeaux, in fact, every spray of interest to the orchardist was exhibited there. The efficacy of the Vallo Codlin Moth tree bands was shown in a band which was exhibited containing over 300 Codlin Moth grubs, collected in one season.

The Lightning Fruit Grader Company exhibited their new models of 1936 ploughs and extension disc cultivators, horse-drawn and tractor drawn; these were in addition to other implements, including spring tyne cultivators, disc ploughs, harrows, Lightning graders and other packing house equipment demonstrated included washers, sterilisers, driers, polishers, sorters, sizers, etc. Much interest was displayed in the working models of fruit graders.

Malcolm Moore Ltd. demonstrated to many growers the efficiency of the English Fordson, rated at 26 h.p. which supplies power on the orchard for such jobs as ploughing, grubbing harrowing, spraying, timber cutting, pumping, hauling to market, etc. A complete range of Oliver ploughs suitable for market gardeners, berry growers and orchardists were also demonstrated.

F. R. Mellor's stand, which adjoined that of D. Harvey, included a number of lines for which he is Victorian agent, including William Cooper and Nephews orchard sprays, comprising Arsinette, Alboleum, Bordinette, Colloidal Sulphur, Drymac, Ovicide, etc. Other lines of interest to orchardists on this stand were the Amazon highpressure spray hose, fruit picking bags, packing house equipment, and general orchard requisites.

Mitchell & Co. Pty. Ltd. had on their stand, of particular interest to fruitgrowers, the Mitchell power spray plant, which is operated by a 3 h.p. Lister engine and contains, amongst other features, a Myers' type pump. They also included an extensive range of farm and orchard ploughs, cultivators, etc.

nected to engine by gear drive, with strainer and Y hose connection, and double spray. "Sunshine" ploughs and cultivators, etc., also contained much of interest to orchardists.

Nitrogen Fertilisers Pty. Ltd. included in their stand an attractive display of Apples, Pears, Oranges, dried fruits and canned fruits. Of particular interest to fruit and vegetable growers is their 2:2:1 perfect balance complete fertilizer. This contains 81 per cent. nitrogen (as sulphate of ammonia), 83 per cent. phosphoric acid. 10 per cent. potash.

Oxlo Fruit Grader: This was on exhibit at Stand 229, Skene-street, Showgrounds. The Oxlo sizes any fruit by weight. Some outstanding features are its all-steel frame, great capacity ample bin space, packing frontages, self-balancing cups, and new patented fruit feed. The Oxlo grader gives accurate sizing, in a twocolor section sorting grader at low

Ronaldson Bros. and Tippett Ltd.: Ten different models of orchard spray plants were exhibited on this stand. The standard model is the Ronaldson FN two-wheel plant. This has many outstanding features, which were demonstrated throughout the Show.

Russell and Company, of Box Hill, had their usual stand at 97 Smith-street, where the "Bave-U" power sprayers were exhibited. A complete range of these power sprayers, which have found their way into almost every part of Australia, were demonstrated.

Ruston & Hornsby Pty. Ltd.: At this stand, chief interest was displayed by growers in the slow speed horizontal-type Ruston crude oil engines, suitable for cool stores. These engines, which are suitable for general purposes, are noted for their long life and low cost of maintenance. Many enquiries were also received at this stand for other types of machinery, including oil engines, petrol, paraffin engines, road rollers, oil locomotives, excavators, air compressors, etc., etc.

The Shell Co. of Australia Ltd.: Spraying oils manufactured by the Shell Company were included at their stand, comprising white oil, red oil, Shellicide D, and prepared crude sprays. Pennant kerosene for lighting and heating also formed part of an interesting exhibit.

Trewhella Bros .: This firm demonstrated its usual range of tree pullers and "Monkey" grubbers. A new motor truck telescopic jack, which was recently added to the range of heavy duty jacks put up by this firm was of particular interest to truck owners.

Vacuum Oil Co. Pty. Ltd.: At this Company's general stand were displayed the various spraying oils distributed by this firm, including Gargoyle Red, White, Pale and Prepared Crude Sprays. Growers who visited this stand also showed much interest in the attractive displays of the Company's other products. "Laurel" kerosene for domestic and heating purposes was also demonstrated.

R. Werner & Co. Pty. Ltd. occupied their usual stand, where their representatives were in attendance answering many cool storage problems. Many of these were directed along lines of the claims of direct expansion method H. V. McKay Massey Harris Pty. of refrigeration, as compared with the Ltd.: The "Sunshine" spraying outfit was shown in an unmounted form ready for bolting on to a solid steel dividual growers contemplating buildframe for use on lorry, dray, truck, ing small stores on their orchard.



Twenty uses for A.M.P. Policies

Y A.M.P. policies have an extraordinary range of usefulness," said a doctor recently. "They keep me from worrying, and they'll pay off my mortgages when I'm gone"—and then, with a twinkle in his eye—"maybe they'll make it unnecessary for my widow to marry again."

The Society would like as many citizens as possible to benefit by the service it renders the community, and so it prints this list of uses for its policies. Maybe members, out of their experience, will be able to add other uses to these:—

They end worry.
They prolong life.
They ease the sick.
They comfort widows.
They feed children.
They preserve homes.
They build up assets.
They keep families together.
They provide schooling.
They increase self-respect.
They pay off mortgages. They pay off mortgages.

They provide dowries. They pay death duties.
They encourage marriage.
They perpetuate incomes.
They give peace of mind.
They provide cash in emergencies.
They make provision for employees.
They are badges of good citizenship.

If you, who read this, see in this list some benefit that you would like to enjoy—or would like your family to enjoy—'phone, write, or visit the nearest A.M.P. office. The Society offers the service—it is for you to seize upon it!

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VICTORIA

The Mornington Peninsula

A Progressive District Producing High Quality Fruit (By Our Travelling Representative.)

In this article our representative deals with orchards in the TYABB DISTRICT. Details regarding Hastings, Somerville, Red Hill, Merricks, etc., will be published in our next

WHILE VISITING ORCHARDS, poultry, and mixed farms in the Mornington Peninsula, the writer was impressed with the progress made in fruit growing, poultry management, dairying and pig raising during the last decade. Ap-preciation of the "Fruit World" was

The orchardist now ploughs his place at least twice a year, up for the Winter and down for the Summer, and manures, so as to obtain a heavy crop of green stuff for ploughing in in the Spring; thus keeping the soil open and renewing humus. Farm and poultry manure is in demand, but in most cases difficult to get, and artificials are used. Some favor "blood and bone" at 4 cwt. to the acre, with 3 or 4 lbs. sulphate of potash per tree, while others prefer super., ammonia, and potash, 2:2:1, at about 2 cwt. per acre.

These methods somewhat run in groups, those on the lower grounds near Westernport Bay favoring the former, while those on the higher ground towards Mornington the latter. These high lands are comparatively heavy, and the Bay lands sandy.

Quite a number of returned soldiers are amongst the "up-to-date" growers, one who is particularly worthy note is Bill Shaw, who lost his leg "at the front." He grows some fine Apples, especially Romes, Tasmas, and Statesman, doing some of his own ploughing and pruning in 35 acres of orchards, and this work is not easy, even for an able bodied man. I saw him packing early this morning at Tyabb Store and he tells me that he attributes the splendid appearance of his fruit to the free use of sulphate of potash. The engineer, who was present, added that additional keeping qualities were present as well as extra

These two men were very emphatic as to the correct time for pickingthis can only be learnt by experience.

Across the road from Mr. Shaw's is W. C. Murray's orchards and mixed farm, and here the trees are flourishing, and a high class herd of grade Jerseys and a number of pigs are kept; this is the highest point on the Mornington-Tyabb road. Adjoining on the east is Sid. Unthank's, and further along Alex. Unthank's. These ther along Alex. Unthank's. These brothers, in conjunction with their younger brother, Harry, carry on extensive orchards and mixed farming, and are greatly in favor of top-dressing their pastures, and I can assure readers that it's wonderful how great is the improvement.

Nearer east is "Little London," Messrs. A. J. Alden and Sons' large orchard, noted for its first quality London Pippins, and heavy consignments are exported annually of this and other varieties.

Several years ago Messrs Alden and Sons built a packing and case making house on the property. This is equipped with a "Lightning" grader, driven by a "Fuller and Johnston" petrol engine, showing their ingenuity by altering the gearing lever position

to the inside, out of the way, thus giving the sorter free room to work

The packers from either side deliver their cases at the end of grader, with the Lidding press and wire-tying machine at hand, and ready for transport to the ship's side.

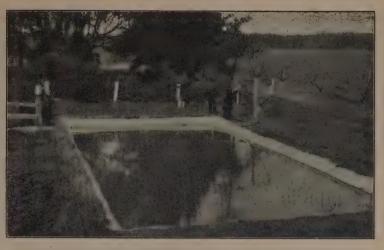
The whole of the fruit crop is exported overseas. Any damaged or inferior stuff is sent straight away to the factory, thus at the end of the picking season the fruit is done with. Mr. Alden states that he chose this wholesale method of disposal, as the staff have plenty of work in the or-chard, without further handling of fruit

Outside the buildings are numerous tanks, the overflow from which run into a reinforced concrete dam. This is constructed in a handy position, so as to serve both paddocks and orchards. On each side is a pump, one to fill troughs for stock, and the other to supply the spray vat. Before the water enters this 50,000 gallon dam, it passes through a concrete cistern; this can easily be cleaned out, and so the water in main reservoir is kept

Next we come to H. J. Willoughby's (who at present is Chairman of Directors of Tvabb Trading & Cool Store) This estate is particularly well sheltered by pines, which protect the well assorted varieties of Apples and Pears; Packham's Triumph and Winter Cole being very choice.

Near by is Mr. Val. Kerr, who is well known to most Victorian growers of fruit, not only as a producer, but as an able platform speaker, and one who is always courteous and pleased to help the beginner. He grows many varieties of Apples, and excels in Gravenstein.

Next is Bob Mair's, and his Pear orchard on the main road has made fine progress the last few years. This spot evidently suits Pears, which is opposite to Upper Tyabb Park, where many picnics are held. Adjoining is Plums, Apples and Pears.



Concrete dam on the orchard of Mr. A. J. Alden, Tyabb, Vic.

his brother, W. P. Mair (who is a director of the Store). This is the property which belonged to the late Mr. Will Steer's place is next, and Mr. Robert Mair, who was the father of Rob. and Phil. The late Mr. R. Mair was the pioneer of cool storage on the Peninsula, and had a hard battle to bring others into his way of thinking. Fortunately he lived to see the accomplishment of his wish. Mr. Phil Mair is also a distributor of bees to the orchardists.

The hirers claim that this is one of the best methods of pollenation.

Mr. E. Connop comes next, for many years associated with "Two Bays," has applied his experience to his own place, where very heavy crops of Jonathans have been gathered during the past five years. Around the neat home, Mrs. Connop has a very pretty flower garden, of which she is justly

Then, on the corner of Boe's-road. opposite the State School, is Signor L. A. Paganoni's. This orchard was planted by Les. Devlin, who sold it to its present owner, just as it came into bearing. The owner has since built a fine brick residence. This demonstrates the profitableness of his ven-

Further south, and adjoining Paganoni's, is Cliff. Flood's, another A.I.F. soldier, whom it is a pleasure to meet. He grows all the useful varieties, and like Bill Shaw, is a very practical man, and a father of a fine growing family.

Still further south is Mr. W. Boe's, who grows the useful varieties of have more difficulty with drainage, as

is managed by his son, Walter. He, like his neighbours, is a prominent member of the Co.-Op. Society.

Last on this road is Albert Benton, who is a noted grower and a very appreciative subscriber to the "Fruit World." I should have mentioned Mr. C. Renouf; he comes in between L. A. Paganoni and Cliff. Flood. This orchard has a fine easterly slope, has been pipe drained, at considerable expense, but shows the result in the healthy growth of the trees.

This enterprising orchardist was obliged to erect and equip an "up-tothe-minute" packing house of his own to handle increasing crops.

In the Tyabb district alone, about 150,000 cases for the 1936 season were picked, and the Peninsula approximately 350,000.

The Tyabb Packing House has a floor space of 126 ft. x 36 ft., all cement floor, four large doors, each large enough to admit a motor truck), office, indirect lighting (so that sunlight does not shine directly on the work), and perfect Louvre ventilation. The "Lightning" grader for twenty-two packers is driven by electric motor and electrically lit when necessary. Gravity conveyors, wire tying machines, lid presser complete a modern packing establishment.

On the Eastern side of the Railway, near Westernport, is another group of growers, and although their pruning is similar to that adopted by growers on the high ground. They Of the these properties are nearly flat, so

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more cross drains. This group par- farmer in paying for manures. ticularly favor blood and bone manure with potash. Messrs. Len Clark, Cliff. Van and H. T. Noble and Sons, who are neighbours, on McKirdy's-road, are very emphatic in favor of B. & B. They state that, when they used the Super, etc., and left it off for one year, the trees immediately showed terioration, whereas with B. & B. no falling away was noticeable.

On the Cranbourne-road are some more ex service men, namely Fred Gregory, Norm. Houfe (a son of the late Thos. Houfe, who was Secretary to the Tyabb C.S. for many years), and Bert Hollier. These are all successful orchardists.

The Government subsidy of 15/- Brunnings are expanding extention, the credits for empty manure sively, and have large properties in bags, and the discount allowed by the Baxter, Somerville and Tyabb.

have to ridge up higher, and make | Co.-Op. Societies greatly helps the

Along the main road some of the largest men have their holdings. Prominent amongst these are the Brunnings, Coles, Grants and Shepherds. Being early settlers they had the pick of the country.

The Brunnings have their own cool store, situated a quarter mile from main Flinders-road, on O'Neill's-road. The capacity is 17,000, and the system "Direct Expansion," with ample packing and case making rooms. The fruit this season is keeping splendidly under the supervision of Tom Holley, who lives alongside. As well as being orchardists, the above four are well known nurserymen.

G. G. Cole and Sons, now carried | on by Capt. Lewis Cole and his brother, Les., have Somerville and Tyabb. have properties in The father, G. G. Cole, bought wisely along the main road; has now retired from business, but although over 80 years of age, is still actively engaged in his

garden, which is always a picture.

The proprietor of "Rosalton Nurseries," Lawrence Cole, is another son, and an ex A.I.F. man. He specialises in Roses and ornamental shrubs. The eldest son, Mr. Cliff. Cole, who is also a nurseryman and orchardist, is engaged in mixed farming. He is an advocate for boring for water; he has an elevated tank above his bore, and pumps up the water, which is laid on to the house and garden.

Mr. J. D. Grant, who is so well known as the winner of cups and



Summer working the orchard of Mr. C. Renouf of Tyabb, Vic., with a one-way disc cultivator.

trophies at the Royal and other shows, is ably assisted by his sons, Ray and Ken, in their nurseries and orchards. J. D. Grant has recently built a fine residence near the Railway Station, and Ray has built on the orchard situated on Denham-road, while Ken has his father's late residence.

Fruit Packing Instruction.

On Wednesdays of each week, Mr. B. Krone, Fruit Packing Instructor, Department of Agriculture, has a class of 16 children (both sexes) from the two State Schools, Upper Tyabb and Tyabb Station, who learn uniformity in fruit packing.

These lessons are looked forward to by the children, and appreciated by the parents and others interested in the marketing of fruit. Mr. Krone, who is the essence of courtesy, puts leading questions to the scholars, and the writer noted the correct answers given. The chief points emphasised were the superiority of the straight method of diagonal packing, wrapping and placing of each Apple so as the "pad" will save bruising, the correct number of layers and number in each layer, the correct degree of tightness for different sizes, so as to bring the top layer the right height for lidding, for safe transport.

On other days classes are held in different district packing sheds.

ORCHARD FERTILISERS.

Time of Application.

Time for application is an important factor for successful orchard manur-Early Spring is the most popular time to apply fertilisers.

The thinking orchardist studies the requirements of his plantation, and varies his fertiliser application to suit the individual requirements of his trees. Practical experience has shown him that nitrogen is the most important plant food. It is the growthproducing element, and without suitable growth trees are unable to maintain a high-yielding capacity. Nitrogen also helps to form the next season's fruit buds. It also improves the "set" of the crop if applied early enough.

There appears to be little difference in the value of the various forms of nitrogen, unit for unit, provided each form is applied at a time of the year suited to it. For example, organics should be applied in late Autumn or early Winter if they are to be available to the tree at the all-important blossom or bud-burst period.

On the other hand, the soluble fertilisers (inorganics) are best applied about two to three weeks before active growth commences, as they are immediately available to the tree roots. The best form appears to be the cheapest per unit of plant food. It is for this reason that sulphate of ammonia is recommended by Departmental and other authorities. as a supplier of nitrogen. Where a complete manure is desired the 2:2:1 mixture appears to offer the most suitable balance between nitrogen, phosphates, and potash at the lowest unit



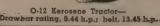
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W-12 Kerosene Tractor— Drawbar rating, 8.55 h.p.; belt, 13.88 h.p.

Victorian Fruit Crops

The frequency of rain, hail, wind, and frosts in September reacted against an even blossoming of trees, causing some damage to buds and early blossoms, states the Horticultural Division of the Vic. Department of Agriculture, in its seasonal report, issued at the end of September, but it was too early to estimate the amount of damage. In all districts the flowering of Apricots had been very irregular, and present indications pointed to approximately a 60 per cent. crop. Peaches appeared to have set well. In the Goulburn Valley practically a full crop had set, and the same condition was reported from the Horsham and Doncaster districts. Plums and Prunes should give a good crop provided there were on further frosts to check the erop.

At Shepparton the Williams and Packhams promise to be heavy, while Josephine and Nelis are light. In the Doncaster district Pears are promising well. In the Mornington Peninsula they are also good, except Bosc, which is showing light blossom buds. Around Bamawm, Packhams and Nelis promise well, but Williams, Jos., and Bosc. are light.

VICTORIA LOSES ABLE ENTOMOLOGIST

But Queensland Gains

Mr. Keighley M. Ward, M.Agr.Sc. Takes up New Duties on November 1 in Northern State.

Victorian growers will regret to learn that Mr. Keighley M. Ward, M.Agr.Sc., is about to leave the Victorian Department of Agriculture to take up a position in the Division of Plant Industry, Department of Agriculture, Queensland.

Mr. Ward graduated as Bachelor of Agricultural Science, Melbourne University, in 1930, and since that time has been on the staff of the Victorian Department investigating the life history and control of insect pests attacking fruit trees.

Mr. Ward's most prominent work was the investigation into and control of Green Peach Aphis in the Goulburn Valley; as the result of this the pest is now regarded as a minor one so far as control is concerned, whereas previous to his investigation it was a major one, and was responsible for



Loading Apples and Pears in C. J. Nash's orchard on transports for despatch to packing shed.

what patchy in the Peninsula, at Doncaster, and also at Harcourt. Delicious has failed in many Harcourt orchards, while in the North-East, the same variety is patchy. Granny Smith is promising well generally, a reasonably reliable estimate cannot be made until about the end of November.

Citrus Crops

continue to come in, and the new blossoming is coming on well. Wangaratta district is harvesting the Washington Navels: Lemons are showing a good crop. There was a serious frost on September 25 all along the Murray Valley, which did damage to the vineyards. Wherever growers lit fires or used oil pots, very little damage occurred. Damage has also occurred at Bendigo, Templestowe, Diamond Creek and Quantong. on November 1

Jonathan Apples appear to be some- the annual loss of thousands of pounds worth of damage to the Peach crop. He proved that the correct and best control is to attack the egg stage of the insect in July with an application of a certain formula of tar distillate. As a result of this work, the Melbourne University conferred on Mr. Ward the Degree of Master of Agricultural Science. Other research work includes citrus Red Scale, Grass-hoppers, Thrips, Oriental Peach Moth, Apple Leaf Hopper (Jassids), etc.

> He is the son of Mr. J. M. Ward, Superintendent of Horticulture, Victoria, and is held in high regard by fruitgrowers and others in Victoria.

> Victoria can ill afford to lose such young scientists of the calibre of Mr. Ward, but Queensland growers are to be congratulated on obtaining his services. His new duties commence

> > GERRARD The The That Binds



Nickajack Apple tree planted at the orchard of Mr. C. J. Nash, Shepparton, Vic., in 1914. Following are the yields per tree for the last four years:—1933, 30 cases; 1934, 32; 1935, 32; 1936, 35. These figures are exclusive of waste, which would probably amount to several cases each season.

Southern Fruitgrowers' Association | FRUITGROWER FOR VICTORIAN

A meeting of the Executive of the Southern Fruitgrowers' Association was held at Box Hill on September 3,

There were present Messrs. F. G. Beet, President, F. C. Pyke, L. Webb, E. Noonan, G. G. Miller, W. A. Thiele, and Secretary.

Apologies were received Messrs. L. Pepperell and O. White.

Correspondence.—From the Commonwealth Bank of Australia, forwarding their last payment, viz., £66/13/4, from the Rural Credits Development Fund towards experimental work carried out at Doncaster, asking for particulars of the activities of the Association.

From Mr. J. M. Ward, stating that it was their intention to form a small committee in each district where demonstration plots will operate.

Lengthy correspondence was ceived from the Minister for Customs dealing with Apples imported don, previously held this seat for 16 from N.Z. (this being a reply to a letter sent), stating that the landed cost for a bushel case containing 42 lbs. would not be less than 10/-, and as importations from all countries for the past fifteen years has been 341 centals, valued at £297, there was no fear of undue competition.

It was resolved that a further letter be drafted and forwarded on to the Minister.

Victoria Market Hours. -Noonan reported on a meeting held in the Temperance Hall, Melbourne, re the opening hour at the Victoria Market, delegates being present from Diamond Creek, Wandin, East Bur-wood, Doncaster, Market Gardeners' and the Southern Growers.

After the matter had been fully discussed a resolution was submitted that the opening hour be 6 a.m., with no curtailment of selling hours. On being put to the meeting the motion was lost by 7 votes to 5.

The Secretary reported on the Greater Melbourne Scheme that primary producers would need to watch, as markets and marketing were in the proposed Bill, which no doubt would receive severe handling before

PARLIAMENT.

Mr. J. G. B. McDonald, of Shepparton.

Mr. J. G. B. McDonald is to be congratulated on being elected as new C.P. member for Goulburn Valley in the Victorian Legislative Assembly. Mr. McDonald will be the youngest C.P. member in the house, he being only 37. He has resided in the Shepparton district for 25 years and is a prominent orchardist in that district; as such he is convinced that irrigation rates are too high. He states an injustice is being done in charging 10/an acre for water in Shepparton district, and Mr. McDonald suggests that the State be responsible for all charges except maintenance, which the growers would pay.

Brigadier M. J. Bouchier, now Agent-General for Victoria in Lonyears.

Mr. McDonald is a former member of the Shepparton Shire Council, President of the Shepparton Irrigators' Association, a member of the Executive of the Victorian Fruit Marketing Association, and a past President of the Goulburn Valley Second Eighteen's Football Association.

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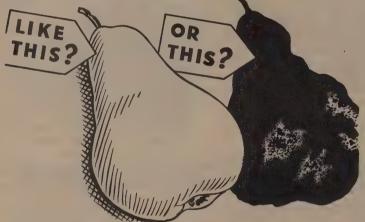
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The slight additional cost in reaching London markets is altogether outweighed by the tremendous advantages of

days saved.

Deterioration is avoided by special arrangements for sorting to mark, and quick refrigerated trains direct to London.

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Before the next exporting season, give serious consideration to these advantages, and when arranging space allotments for London Markets, ask for Southampton Discharge.

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MID-MURRAY NOTES.

SUCCESSFUL FROST FIGHTING - EARLY SPRING ACTIVITY . IMPORTANCE OF SOIL FERTILITY — PEAR GROWERS PAY SPECIAL INSPECTOR TO ENFORCE SPRAYING REGULATIONS.

(By Our Correspondent.)

Renmark, September 16, 1936. .

frosts than in some of the South Australian irrigation areas.

In the Berri area, concerted action has been organised over the areas which are considered to be dangerous frost pockets, but by far the greatest area covered has been in the Waikerie Settlement, where an area of 200 acres has been so well protected by the efforts of a score of growers, with oil burning fire pots, that the outlay in expenditure of some 6,000 gallons of oil in the two nights of frost has been justified by the saving of the crop in the frost which occurred in the first week of September.

Early Spring frosts have been of frequent occurrence in recent years in the irrigation areas along the River, both in South Australia and Victoria, and have occasioned severe loss to growers in low-lying localities.

This being so, a conference called by the Australian Dried Fruits Association, which took place in Mildura in 1935, to obtain the best knowledge available on frost fighting methods in use in the States of Victoria, S.A., and N.S.W.

A further conference took place in August of this year. Much experimental work was done this Winter by officers of the C.S.I.R. in Mildura, acting in co-operation with the Mildura Frost Committee, and a great deal of valuable information was obtained, demonstrating the number of pots per acre necessary to raise the temperature above danger level.

Both Briquettes and oil were used in the various experimental work carried out in Mildura, but for economic reasons S.A. growers pinned their faith on oil. Frost Committees were formed in Berri and Waikerie through the organisation of the branches of the Agricultural Bureau. and although everything was in readiness for any eventuality in 1935, only isolated places were heated, and with such success that many more growers came into the organisation.

This year the organisations were again in readiness: thermometers were fixed in various places throughout the danger zone, so that at a given temperature (34 degrees), a bell automatically to awaken the sleeper. This grower rang the telephone exchange, who communicated with each grower to be up and doing.

On the nights of Sentember 3 and 4 an extensive anti-cyclone of exceptional intensity hung over the State. which created conditions indicating frost occurance.

Warnings were issued over our own wireless station, 5RM, to be in readiness. Every grower who had been nrenared lit un the nots, and in the Waikerie area it is estimated that 200 acres of vine crops were saved in the two nights when the temperature fell to 27 degrees in the unheated area, the buds keep on developing after the

PERHAPS nowhere in Australia but was raised up to 34 by means of has a more determined effort oil heaters. There is no doubt that been made to fight early Spring oil heaters will now become an established practice in localities susceptible to being affected by frost damage.

The work carried out by Mr. J. B. Harris (Horticultural Instructor in the S.A. Department of Agriculture) must be recognised by his demonstration of the possibilities with oil as a fuel on the property of Mr. Bachin, at Light's Pass, thus paving the way for further work in this direction.

Mr. Harris' work on frost fighting established a basis upon which subsequent experiments were carried out and carried to a successful issue.

Spring Activity.

The vines are coming into life, and trellis wires are showing green shoots right along the rows, and in these shoots every grower looks for his future crop. Every year at this time the topic of conversation leads to bud burst and crop indications, and in looking over the settlement I find a good deal of variation in crops showing on Sultanas. In some places many barren shoots are in evidence, while in others, an extra good crop is in evidence.

For many years I have kept a close watch on the why and wherefore of this crop variation, and can now definitely pin the cause down to the difference in soil fertility.

The grower who adopts a policy of growing yearly cover crops and husbands his land in an understanding manner rarely gets an extreme variation in a count of bunches; but the man who does not incorporate organic matter into the soil must expect a reaction in crop returns.

The absence of organic means a dearth of soil organisms, which constitute the foundation of soil fertility.

It is notable that in the majority of cases the indifferent Sultana crop showing this year is on land which has not been properly supplied with organic matter. This uneven cropping peculiarity, is also noticed with Apricots this year.

On some blocks the trees have flowered profusely, while on others the flowering is uneven. When blossoming is spread over a long period, it is rare to get a good crop.

Here again the indications point in favor of the green manure man.

A scientist once said that it takes 25 years for the findings of science to penetrate the mind of the primary producer. This does not apply to the Irrigation Settlements, for the work carried out by the C.S. & I.R. on land development within the last few years has led to a better understanding of plant life.

In the bad old days, little interest was taken in our trees or vines, after the fruit was harvested, but the research work has revealed the fact that

fall.

In one case of a poor Apricot crop, the cause was found to be a lack of sufficient moisture to carry on the bud development to its fullest capacity. The grower had not taken the Autumn irrigation, and the results are reflected in a poor blossoming this Spring.

Renmark received a visit from a delegation of 37 New Zealand farmers on Monday last, who are touring Australia. After visiting the citrus packing shed of the Renmark Fruit Growers' Co-operated, they were taken to the Co-operated Distillery, and then visited the citrus orchard of Mr. C. H. Katekar, after which they were entertained at a reception at the Renmark Hotel. They expressed themselves in no uncertain manner about the charm of this irrigation settlement.

Last year the Pear growers of Renmark formed an Association, and agreed to a levy of 2d. per full bearing tree, to help to pay for an inector to enforce the spraying regu-

On Monday last, September 15, the annual meeting took place. Mr. F. H. Basey (President) occupied the chair, and outlined the activities of the Association during the year. In the course of his remarks, he pointed to the successful year, especially regarding the small percentage of Codlin infested fruits. This he attributed to a great extent to the work of the inspector in policing the district and getting all unsprayed trees either sprayed or grubbed.

Mr. Basey said that growers had never taken so much trouble with their spraying as last year, and this fact, combined with the destroying of windfalls, certainly gave beneficial results, and he looked forward to the coming season with renewed optimism.

The Chairman's remarks were supported by Mr. J. Price, Mr. F. Hooper, and Mr. M. B. Geneste. LATER.

Severe Frosts.

We have just experienced the worst frost since the memorable freeze in 1927. On the night of September 24, following a few minor frosts, a very severe frost settled in the River areas, and a great deal of damage was done to Sultana vines. It is not possible to estimate the amount of loss throughout the area, because of the fact that the frosting of the shoots showing will force out those still remaining dormant. In individual cases the loss has been very heavy, while others remain untouched. In notorious frost pockets, it has been demonstrated that prevention of damage can be established by the use of oil burners, but the peculiarity of the freezing wind counteracted this influence in some areas, and even where pots were burned, damage was sustained. Currant vines have not suffered to the same extent as Sultanas, showing this vine to be hardier and better able to stand up to conditions which the Sultana is not able to do.

Growers should get into touch with Empire Produce Exports.

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crop is harvested, and until the leaves Australian Dried Fruits Association

Thirteenth Annual State Conference

The thirteenth annual State conference of the Australian Dried Fruits Asociation was held at Clare on September 24. Delegates who attended represented every producing centre, with the exception of Cadell, from whom apologies were received.

The delegates and districts they re presented, together with a list of visitors, are as follows:-

(Clare), Messrs. Victorsen and Neate; (Berri), Mesrs. Curren, Wishart, Nicholas, Ingerson, Johnson; (Renmark), Mesrs. Howie, Ruston, Seary, Moss, Weste, White; (Mypo-longa), Mr. Burrett; (Stanley Flat), Messrs. Quirk, McGaskell; (Barmera), Messrs. Sims, Till, Shepherd; (Waikerie), Messrs. Murdoch, Jemison, Odgers, Williams; (Angaston), Messrs. Chapman, Rudford; (McLaran Flat), Mesrs. Bruce, Fraser: (Kingston), Mr. Chaston.

representatives: Agents Shepherd, Hayter, Newton and Jones. S.A. Prune Growers' Association, R. Haynes. Visitors, Messrs. C. S. Hawker, M.H.R., T. K. Smith, Loxton, Penna, Martin, Lee Winterbottom.

Mr. A. J. Chapman acted as conference Secretary, assisted by L. A. White. Mr. H. D. Howie acted as Chairman.

One of the items which came under discussion was that of

Moist Pack Apricots

and their application to all conditions of the trade. It was thought that in some instances, such as the Queensland market, it was an open question whether the moist pack would stand the acid test of time. There was no doubt in the minds of the selling interests that the moist pack provided a better appearance, and was more acceptable to the majority of buyers, but the tropical conditions of Queensland induced the fruit to lose color more rapidly than in the southern States, if not treated properly. good deal of research work had been carried out by the C.S. & I.R. during the last year regarding the relationship between sulphur content of dried Apricots in the moist pack, and the color keeping quality of the fruit. The conclusions arrived at by the conference was that re-sulphuring after moistening should be established as a general practice to prevent decoloration. The amount of sulphur content might be definitely established after another season's research work.

Commonwealth Constitution.

The most vital point which came under discussion at the conference consisted of the policy to be adopted because of the breakdown of Section 92 of the Commonwealth Constitution, bringing about a dislocation of our marketing conditions, and after much discussion the following resolution was passed:-

"That this conference of dried fruit growers of South Australia urges the Commonwealth Government to seek a restoration of those powers it exercised in conjunction with the States in all good faith, prior to the James Case, whereby the State legislation dealing with dried fruits was made effective; and further urges the State Governments to support a Referendum to this effect, the result of which is vital to the future welfare of our industry."

In view of the importance of this matter, growers at the conference expressed their willingness to subscribe to a voluntary levy to cover the cost of a campaign with this end in view when the Referendum campaign was launched.

The following delegates were elected to represent South Australia in the Federal Council meeting to be held in Adelaide in October:--Messrs. Chaston, Fraser, Curren, Jemison, Chapman, Ruston, Sims.

On the evening of the conference a social was arranged by the Clare branch of the A.D.F.A., and attended by all delegates, together with the leading townspeople, and the following members of the State Parliament:—Messrs. A. P. Blesing (Minister of Agriculture), and Messrs, A. J. Melrose, A. L. McEwan and Christian.

After the Chairman's address and the toast of the King, by Mr. J. Victorsen (Chairman of the evening), Mr. H. D. Howie toasted the Federal Parliament and covered the relationship between State and Federal Parliaments, and urged the co-operation of both bodies, as only by this cooperation could the people of Australia enjoy the benefits of full citizenship; especially did this apply to the seed industry: Mr. A. J. Melrose, M.P., responded, and hoped to learn something of this industry in the course of the evening's proceedings.

Mr. D. C. Winterbottom toasted "The Industry," and gave a comprehensive outline of the history of the growth and working of the Austrafrom its inception in 1895 up to the future.—"Nemo."



Comparing the trials and tribulations of the producers of Raisins and Currants in a disorganised body with that enjoyed when legislative powers enabled all producers to enjoy a proportion of each market available, which put the industry on a sound footing. Mr. Winterbottom's address was proclaimed by local growers as the finest of its kind ever given to a body of Clare growers, and hope was expressed that it would appear more fully in a published form. Mr. Jemison responded, and ably supported Mr. Winterbottom.

Mr. Deland toasted the State Parliament, which was responded to by Mr. A. P. Blesing (Minister of Agriculture). Mr. Blesing's attitude towards the forthcoming Referendum was clearly defined in his support of just those powers the dried fruits industry are seeking, and this assurance was very gratifying to all those present. Mr. A. H. Fraser toasted the "Town and District," which was responded to by His Worship the Mayor. Mr. J. W. Ohlmeyer, and Chairman of the District Council, Mr. C. Neate.

The Press was toasted by Mr. N. Reid, and responded to by Mr. R. H. Tilbrook. Mr. P. H. Quirke toasted "The Visitors," which was responded to by Mr. McEwin, M.L.C., and Mr. Christian, M.P.

It was very comforting to hear every member of our State Parliament express his willingness to stand behind the dried fruits industry in their endeavour to have the powers restored to them which they enjoyed previous to the Privy Council decision. All members also expressed their appreciation of Mr. Winterbottom's address, and stated that they had learned a great deal from his remarks, lian Dried Fruits Association right and wished the industry success for the

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South Australian Fruit | shall be of one variety they need not | Apple and Pear Council Conference. Marketing Association, Inc.

Executive of the S.A.F.M.A. Spot. was held at Adelaide on September 26.

Basey, A. G. Strickland, E. S. Mason, H. N. Wicks, R. A. Cramond, A. R. Willsmore, P. R. B. Searcy, M. Vickers, R. S. McDougall, F. B. James, J. B. Randell, F. F. Redden, and E. W. Mills (Secretary).

Mr. Bishop reported that the delegates from Coonawarra had interviewed him re Federal Grant and hail out is desirable." damage, and they might attend the Apple and Pear Export Council conference and state their case.

of thanks to Mr. A. G. Strickland for tions to provide that while Apples

HE monthly meeting of the the most instructive address on Black

Interstate Grade Standards.

Letter from Mr. A. G. Strickland Bishop (Chairman), R. G. Hannaford, A. O. Petersen, J. S. Hammat, M. G. Basev, A. G. Strickland, T. G. Mr. G. Strickland agreed to at a conference held in Sydney. of the Association in regard thereto.

After considerable discussion, Mr. J. B. Randell moved, and Mr. H. N. Wicks seconded: "That we appreciate the action of the Department of Agriculture in referring the matter to us, and members are of the opinion that the gazetting of the regulations as set

An amendment was moved by Mr. F. F. Redden, and seconded by Mr. R. G. Hannaford:—"That an altera-It was resolved to record a vote tion be made in the suggested regula-

After further discussion the amendment was lost, and the motion was carried. Only grower members vot-

Mr. Strickland stated that in his opinion the new regulations would not be troublesome to growers, and they could depend that his officers would give a reasonable interpretation.

Pear Export Litigation.

Letter asking for financial assistance to meet large costs in fighting the "Port Brisbane" Pear case. Secretary to obtain further information from the Batlow Packing House, and from the Secretary, Apple and Pear Export Council.

Letter from Government Produce Department, enclosing notes from Trade Commissioner, London, of an Apple and Pear conference held in London on August 27, 1936. It was agreed that a copy of the letter be sent to the Associations in the other States to enable the questions raised to be discussed at the Apple and Pear Choice Fruit at South Avstralian Export Council conference.

dell were again appointed as delegates to represent this Association at the October conference

October Meeting.

As the last Friday in October was the day fixed for Tanunda trip, it was resolved to hold the next meeting on Friday, November 6, 1936, at 2 p.m. at the Board Room, Adelaide Fruit and Produce Exchange, to be followed at 3 p.m. by the annual general meeting.

Mr. H. J. Bishop notified members that he was definitely resigning the office of President this year.

Junior Apple Packing Competition.

The Secretary advised that this event, for which the Association donated a prize to the value of £2/2/-, was won by Mr. C. J. Young, who was also successful last year, when he was presented with a silver cup.

Royal Agricultural Show

PPRECIATION was for the improvement in the standard of the fruit exhibits at the Adelaide Royal Agricultural Show in September.

In the competition for the Orient Line Trophy for Apples, the prize-winners were W. Rehn; H. N. Wicks (two sections). The judges (Messrs. L. M. Brown, E. Leishman, and H. J. Bishop) were of the opinion that judging in London and South Australia should take place simultaneously; the fruit sent to London had been consumed two months ago.

The judges also held the view that for show purposes competitors should have marked their exhibits "Extra Fancy" instead of "Fancy."

The quality of the fruit in the Gerrard Export Trophy competition was excellent. The difficulty of the judges in placing the awards will be noted that the points awarded for the three entries were 91½, 91, and 90½ respectively. Prize-winners were V. D. Morgan, E. J. Pitman, and H. T. Nicholls.

There was only one pyramid of Apples, and the hope was expressed that more of these spectacular displays would be made in future.

Considering the extent of the citrus growing industry in South Australia, surprise was expressed that there was not a larger display. There was only one pyramid, and there was room for many additional entries in the several competitive classes.

Prize-winners (Apple and Pear Section), included Messrs. E. J. Pitman, W. Rehn, T. E. Grivell, J. Fulgrabe, and D. Hay.

Citrus (Navels, Common Oranges, Grape fruit, Lemons, Limes; etc.), Messrs. A. J. Harvey, E. V. Harvey, C. S. Jenkins, E. R. J. Naismith, W. H. Ind, H. A. Headlands, H.

Loquats, H. Tassie; Tomatoes, H. A. Headland, J. W. Parsons and Sons; Strawberries, J. Tonkin.

Nuts, C. H. Ragless, McLaren Vale Fruit Packers, H. W. Parsons, J. H. Edwards, D. R. Dunstone, R. E. Jeffs, C. C. Ragiess, H. N. Wicks.

Fruits on Pyramids, Hobbs' Challenge Trophy, best collection citrus fruit, Torrens Valley Citrus Association; Wicks' Challenge Trophy, hest collection Apples, Cudlee Creek Co .-Op. Society.

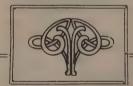
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New South Wales

N.S.W. Fruit Export

ney, containing a report from London from Mr. J. W. Blick, manager of the fruit section of the Society, contain-

Mr. Blick's report is as follows:---

A firm market awaited opening shipments of Australian Apples, which arrived at the end of March, 1936. N.Z. was a couple of weeks ahead of N.S.W. with Worcesters and Alfristons, which in the latter half of March had been realising 10/- to 13/-, and 12/- to 14/-, respectively. Our first Granny Smiths, ex the "Otranto" and "Barrabool," sold 10/- to 13/-, Jon. 9/- to 12/-, and Cleos 9/- to 11/-. Bitter pit was noticeable in bulk of our early Granny Smiths, and added importance was attached to its presence by auction sales as low as 9/6 per case. Publicity of this nature on top of buyers' experiences last year largely accounted for opening prices being lower than in 1935. The limited quantities permitted the gradual absorption, and with the quality improving from boat to boat, prices, after slightly easing, firmed towards the end of April, and remained at a satisfactory level throughout May, and even in June, when other Austra-lian Apple prices had receded to unpayable levels.

Provided the ravages of Codlin Moth can be combated. I can, after exhaustive enquiry, see no reason why our Granny Smiths cannot with advantage to growers be shipped over a more extended season than at present. C.I.F. & E. buyers do not press for February shipment; if they mention that month it is usually when specifying spread deliveries, e.g., a buyer in the U.K. contemplating the purchase of 5,000 N.S.W. Granny Smiths would probably stipulate 1,000 each shipment late February, early March, late March, early April and late April, clearly indicating he proposed keeping his cus-tomers on the line for an extended period, and considered the last thou-sand would be as profitable as the

Pears have been a profitable line in the U.K. this year. N.S.W. arrivals were comparatively light and intermittent; on the other hand, Victoria shipped heavily and regularly, consequently their Pears are a better guide as to the marketing position. Opening prices were good; they eased early, but without in any way slumping, and later recovered. Rates for principal Victorian varieties in oushels were:-

Early April, B. Bosc, 12/- to 14/-; Pkt., 11/- to 13/-; Hwl., 9/- to 11/-.

Early May, B. Bosc, 10/- to 12/6; Pkt., 10/- to 12/6; Hwl., 8/- to 9/-.

Early June, B. Bosc. 12/- to 14/6; Pkt., 12/- to 15/-; Jos. 11/- to 15/-.

Comice are greatly in demand, Standard cases from W.A. were selling at from 14/- to 17/-. There is room for considerable expansion in the export of Pears from N.S.W., especially Bosc.

east Federal Government's delay in announcing one, has been a disappointment to the trade. Failure of much of

LETTER is to hand from Mr. H. N.S.W. fruit shipped during past three G. Such (Producers' Co.-Op. years to stand up to the long sea journstributing Society Ltd.), Sydney to the U.K. is common knowledge; nevertheless the opinion was freely expressed in the trade in London, Hull, Manchester, Liverpool, Glasgow, that ing interesting items of information. Australian Oranges that arrived in good order have been of better quality than South African or Brazilian, and all would have been glad to have seen liberal supplies coming forward this season. Had the Bounty been renewed in May, offers would have been acceptable, and continuity of citrus export assured.

> Lemons also received attention, and, without the assistance of a Bounty, a nice parcel was sold c.i.f. & e. at a very satisfactory price.

> Having completed work in connection with arrival and sale of 1936 Apple and Pear shipments, I am, with the assistance of our London people, the Overseas Farmers' Co-operative Federations Ltd., discussing with the trade the question of arrangements for export of Apples and Pears in 1937. The position is prejudiced by the trade losses in connection with American and Australian Apple purchasers during the past twelve months. Some progress has, however, been made, and our friends interested in export can rest assured that negotiations are being conducted along lines calculated to advance their welfare.

Gosford Bulk Loading Co-Operative.

In the 14th half-yearly statement of accounts of the Gosford Bulk Loading Rural Co-operative Society Ltd., the Chairman of Directors (Mr. W. E. Kirkness) directs attention to the value of this co-operative effort. The capital in December, 1929, was £123, which had increased to £2,130 by June, 1936. The net half-year's surplus totals £673, resulting from trading and bulk loading profits. In the report of the Managing Director (Mr. L. S. Dubois), sundry creditors are shown as £3,858; sundry debtors and stock, £6,974; building and loans account, £1,482; buildings and plant account, £3,326. He recommended an increase of capital to the extent of £1,000.

Wyangala Dam. Capital Cost.

The Minister for Agriculture, the Honorable Hugh Main, M.L.A. (who is also Chairman of the Water Con-

Wyangala Dam, stated that the ac-! tual cost to date was £1,206,497, as compared with the estimated cost of £1,352,000, or representing £145,503 below the estimate. Certain protection work might be required, but estimating the expenditure for that work at £25,000, the cost of construction of the Dam would still be £120,503 below the estimate.

Mr. Main regarded this result as very gratifying, storage having been provided with a capacity of 303,900 acre feet, being 30,206 feet above that provided in the estimate, the height of the dam having been raised 5 feet above the original design.

N.S.W. Fruit Crops

T HE LATEST REPORT from the Under Secretary, Dept. of Agriculture early in September, reads as follows:--

With Apple and Pear crop bud development is satisfactory and should no late frosts be experienced, record crop expected at Armidale. At Young heavy settings of Jons. and Granny S. anticipated. Early Pears moderate to good. Heavy settings of Williams and Packham's indicated.

The outlook at Goulburn and Orange is satisfactory.

Budding of Apples and Pears at Batlow is well advanced and heavy crops should set.

Stone fruits

in inland centres promise well. Apricots patchy at Young. Narrabeen, Santa Rosa and several other varieties of Plums blooming freely. Much shedding of bloom on Mayflower, Sweet Seventeen and Briggs Peaches in this area: crops may be light to moderate. Elbertas and J. H. Hale, likely to be heavy.

In coastal districts, early Peaches with few exceptions set well and Plum prospects appear good. Kurrajong a heavy setting of early Apricots is reported, and in other locations good yields should be har-

HEAVY PEACH PLANTINGS AT LEETON.

At the annual meeting of the Leeton Fruitgrowers' Association at the end of September, the President, Mr. G. Enticknap, directed attention to the recent increased plantings of Peaches, which might easily cause serious overproduction. At Leeton alone the new plantings could provide nearly 6,800 servation and Irrigation Commission) tons of Peaches, compared with half referring to the construction of the that quantity at present. The plant- of Pear shippers throughout Australia.

EARLIER CLOSING.

Sydney Retailers Organising.

A meeting of retail fruit merchants held in Sydney on August 16 sought plans to introduce means for the compulsory closing of shops at an earlier hour than is at present observed. The attendance of about 70 shopkeepers was preponderantly Italian. speakers explained the pro-visions of the Factories and Shop Amendment Act, and it was unanimously decided to form an association and to apply to the Industrial Commission requesting the fixing of earlier times for closing.

A definite approval of the proposals was reported, and it was decided to ask for the hours to be made 7 a.m. to 7 p.m., with 11 p.m. on Fridays, 1 p.m. on Saturday, and a full holiday on Sundays.

ings of Red Centre Peaches at the same rate as Yellow Centre Peaches must cease if growers of the former were not to be put on a quota.

Mention was made of the crop limiting factors, including the Oriental Peach Moth in the Goulburn Valley, Victoria.

The Cannery Board is arranging a conference of Leeton, Griffith and Yenda growers, on the subject of Peach plantings.

PEAR SHIPMENT LITIGATION.

EVIDENCE in the legal action between the Ration tween the Batlow Packing House & Cool Stores Rural Cooperative Society Ltd., and a shipping company regarding faulty carriage of Pears in the "Port Brisbane" was given at Cootamundra (N.S.W.) at the end of September. The taking of evidence will continue until early in October.

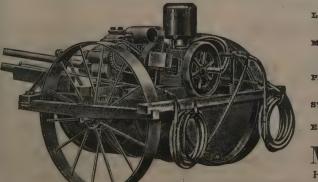
For some time past legal activities have been proceeding in the sifting of essential details.

It will be remembered that prior to this action, legal advice was obtained as to the bearing of this case in Australia, as all previous actions of a similar character have been fought out in England.

This case is of great importance, as matters of principle are under review not only are the interests of the

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Central Packing Sheds and the Co-operative Handling of Fruit

Long Lines of Standardised Fruit are thus Available

(Successful Methods Described by L. S. Taylor, Exeter, Tas.)

N our September issue we published the first portion of a summary of the addresses delivered by Mr. S. Taylor, at meetings of Southern Tasmanian fruitgrowers. The article dealt with the advisability of establishing central packing houses, and re-commended methods for their operation. The continuation of the information is as follows:--

Tamar Association is Successful.

favor the establishment of asso ciations which later can be combined into one organisation, from actual experience in our own organisation.

The Tamar Valley Co-op. Co. Ltd. is owned and managed entirely by the growers. We have eight branches and these are united into one limited company: the fruit is packed to a uniform standard and under one brand, and is controlled by a Board of Directors appointed by the members.

Our shares are one pound shares. and are paid up to 12/6, leaving a floating liability of 7/6. The 12/6 was called during the first four or five years, and we have not made a call for more capital during the last twelve years, nor do we expect to do

The first essential point is the observance of the individual grower's desire to have as much say in his own marketing as it is possible to give him consistant with maintaining the objects of the organisation. The following points will indicate how we view this important point:

- 1. We allow the growers to book their own space direct with the shipping agent, and we arrange, for efficiency's sake, for all the growers in one shed to book through one agent, so that all fruit from a shed goes to one
- 2. All our fruit, with the exception of some of the purchased lines, is marketed under the TAMARCO brand, but the grower does not lose his identity because each label is sub-branded with the grower's own name and the agents who sell the fruit are advised as to the details of each grower's shipments, and he (the agent) is required to furnish us with separate account sales for each grower in duplicate, the grower getting one of the original copies as well as our own account sale. A grower who grows a particularly outstanding line of fruit has a definite opportunity of obtaining the advantage he is entitled to.
- 3. In the matter of selling agents the grower has the right to nominate his own agent, provided that he keeps within a panel which is appointed to sell the company's fruit in each market. And he is not even restricted in this way, because the panel of agents is appointed by the members at their annual meeting, and each

grower has an opportunity of closes we issue a full statement of voting on the question.

4. In the matter of f.o.b. sales we allow our growers full liberty, any grower may sell to any agent at what figure he likes, provided only that he obtains the buyer's signature and places his own on our own contract form as well as the form supplied by the buyers. We have a definite reason for this, and that is to make us a party to the agreement to protect the company, and necessarily the other sharehold ers, and enable us to take any necessary action in the interests of the grower. We, however, do not confine our sales entirely to those made by the grower, and have made some very advantageous sales direct.

Efficient and tactful management of the sheds is very important. We look round for the men we want well before the season, usually about October. We do this: (1) Because we want men we can rely upon to do the job as we want it done, and (2) Because we rely upon them to employ the staff they require for the work in the sheds. They do not actually commence work for us till the shed opens, but it is their duty to find suitable employees to enable them to do a good job. We lay down. of course, a basis on which wages are to be paid because we would soon hear about it if we paid higher wages in one shed than another, and we also give them to understand that preference must be given, other things being equal, to members and their families.

These managers meet together and, with the company's executive officer, discuss all matters in connection with the handling of the fruit in the sheds, and we are thus able to get uniformity of outturn as nearly as is humanly possible.

matter of handling costs

our shed managers play a big part and each fortnight, when wages are paid, the handling costs in the various sheds are compared, and although they vary from fortnight to fortnight, mainly on account of the variation in the sizes to be packed, at the end of the season there is seldom a variation of more than a halfpenny a case between the highest and the lowest handling costs. In the same way the cost of packing sup-plies for each shed is kept, and in this way we are able to keep check on any waste that there may be.

The third point is that an efficient system of service to members must be installed, and in doing this the grower's point of view must always be kept in mind. We endeavor to let the members know every detail

his shipments, giving details of sizes, boats, agents and so on. Then as his account sales come in he is given one of the copies of the original account sales, together with our own account sales. Our own account sales are numbered, and every fortnight a statement is sent each grower show-ing the numbers of the account sales which he should have received dur-ing the fortnight, together with a cheque for the net credit. Then when all account sales are in he is furnished with a full statement of his shinments, and the results in the fullest detail, and is thus able to check them all from the account sales which he has received earlier.

Regarding fruit in cold store we do not ask the grower to accept our judgment as to when this should be marketed. When a grower submits fruit to be packed for store we pack it with the company's label on one end and his own name on the other, and we advise the cold store that it is to be marketed under instructions from the grower himself.

Now, regarding

the panel system

of selling, we have a panel in each of the main centres. There is one common advantage in this, and that is that our brand is confined to a limited number of floors, but in Sydney it has further advantages, and they are these: Our panel meet every Monday morning in Sydney and, having been advised either by telegram or telephone of what is on the boat for them, they discuss the prices they are likely to obtain, and fix prices for the coming week. I do not suggest that they can maintain any price they may fix, but they can confidently go ahead selling. Knowing that no other agent in the markets will sell that brand at a lower figure without first consulting the panel, you will realise what an advantage that would be. Mr. B. O. Plummer ventured the opinion that it was worth 1/- a case to the brand.

The charge to our growers for the handling, all materials including four strawboards to the case, marketing, accounting, delivering to the ship, office expenses, depreciation on sheds and graders, and all services rendered, and includes the cost of pine cases, cartage to the port of entry, is 1/11 per case. As the company belongs entirely to the growers we do not aim at high profits and the charge varies according to our actual

This charge may seem high. You should consider what it contains and ask, when comparing it with your own costs of delivering to the ship, whether you have included the cost of repacking rejected fruit, and the of the work and marketing of his consequent loss, the depreciation of fruit. When the packing season shed graded and picking cases, re-

Great Oaks from Little Acorns Grow

It is from just such small beginnings that a Savings Bank Account will grow into a substantial possession. The habit of Thrift is not hard to acquire and once begun, leads to security. No matter how little you can afford to put by weekly, commence at once. You will be agreeably astonished to note how soon the "mickles" become a "muckle." It is a happy and a safe condition, to have "money in the bank," and the opportunity is conveniently at hand. Not only by hundreds of Branches, but through practically all Post Offices and many private agencies, the Commonwealth Savings Bank service is made available in all Australian districts—in your district.

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With the Most Effective Weapon

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CODLIN MOTH TREE BAND

It is offered with every confidence by the manufacturers as an effective means of control. The band acts as an effective trap, and the chemical qualities of the band kill the grub. Sold in rolls 200 feet long, sufficient to band 140 trees.

Ample suitable clips with each roll.

Weather Resisting and Easy to Handle COOPER & SONS, 626 King Street, Newtown, Sydney

Fruit Trees & Fruit Tree Stocks

Splendid Stock of Healthy Plants Available.

APPLES, PEACHES, PEARS, PLUMS, APRICOTS. CITRUS, ETC., PACKED AND DESPATCHED TO ALL PARTS OF THE WORLD.

Overseas Orders receive careful and prompt attention.

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Phone: Ringwood 171.

pairs and additions to sheds, insurance on shed, grader and stock, and workers' compensations, the waste especially in hardwood cases and wrapping paper, the time taken in making accounts and other office work, the extensive use of the telephone, and the worry over having to see to your own shipments. All these things are definite charges against the packing costs, but seldom do I find that they are included by individual growers in their estimate of what it has cost them to pack and send their fruit to market.

Now, one or two instances of where we have been able to obtain direct financial benefits for our growers which they would definitely not have obtained had they been packing individually.

You will all remember the disastrous year of 1926, the year of the general strike in England, when fruit was sold as low as 2/- per case, and very big losses were made by Tasmanian growers, well, we made our losses as well as others, but after negotiation with out consignees we were able to come to an agreement with them that enabled us to make a rebate to our members of over £1,000, representing about 50 per cent. of their losses.

Again in 1933 our growers made losses as did most fruitgrowers in the State, and we were able to get an agreement which enabled us to write off 25 per cent. of their losses, representing another £800.

For several years the shipping of our fruit cost us only 2d., while individual growers were paying 3d.

These and other benefits could be obtained by an organisation set up down here, and you could do even better than we can because you have the opportunity of making an association so much bigger than we can

Now finally, a word as to finance. I realise that that is one of the biggest problems, and before commencing this tour, I made it my business to find out the attitude of the Government on the matter of assistance to growers wanting to start something of this sort, and I found their attitude very sympathetic, and I believe that you would have little difficulty in obtaining the finance re-

I cannot tell you just what capital you would require to start, that would depend upon so many circumstances, but I can tell you that our capital is only £1,700, plus what reserves we have created during our sixteen years of work, and we handle over 100,000 cases, and often have a cash turnover- of over £30,000.

Briefly then, what I advocate where growers are desirous of handling their fruit collectively, is the formation of local associations in the first place, and the amalgamation of those bodies later into one central organisation, with branches and packing sheds in the various districts. Then and then only will you reap the full benefit from the system, and I am confident that those benefits will far outweigh any extra cost (if there is any) that you may have to pay.

Again let me emphasise the necessity of observing great care in the compiling of your rules, in the management you put in the sheds and the control which you elect.

In conclusion I may say that my company is prepared to give all the assistance in its power to any body of growers who desire to start.

TASMANIA

SEASONAL REPORT SPRAYING AND PESTS - NECESSITY FOR POLLINATION — REWORKING TO NEW VARIETIES — STRICT N.S.W. INSPECTION IS CAUSING WORRY AND LOSS.

(Information obtained by the Chief Cherries, Plums and Pears) growers ment of Agriculture) from the District Orchard Inspectors, together with other information relative, is contained in the following report, received from Tasmania early in Sep-

WEATHER CONDITIONS throughout the fruit growing areas of the State were in complete contrast to those experienced in recent months, and 'exceptionally heavy rains and below average temperatures were the general ruling. Figures which may be taken as fairly representative are as follows:-Hobart, 312 points, as compared with the average rainfall of 183; Franklin, 1,035, compared with 298; Launceston, 1,001, compared with 283.

With the return to milder weather during the past week, bud movement in all fruit is fairly general. Apricots are in full bloom, and the recent spells of sunshine have arrived just in time to assist pollination; blossoming is, however, very irregular in many places. Peaches are also coming along rapidly, and promise a good blossoming, whilst Pears also promise well in most areas.

Spraying and Pests.

Spraying with tar distillates, Winter oils, nitro-caustic and iron sulphide was considerably hampered by the weather, and it is probable that a number of combination sprays will be applied at the "green tip" stage in an endeavour to rectify this. With buds already moving, tar distillates spraying should be suspended and where Red Spider eggs are present in dangerous numbers, oil sprays at 1-15 applied before the "green tip" stage is reached. A gallon of oil in the Bordeaux 6:4:40 will assist spreading and sticking, but does not affect spider Areas which suffered from Black Spot last season must receive every attention.

Ploughing of the leaves in the first measure, followed by "green tip" 6:4:40 Bordeaux. On certain spotty varieties, such as Cleopatra, a "green cluster" spray of 3:3:40 Bordeaux will often prove beneficial if this can be conveniently fitted in before the "pink" stage.

When the Light-Brown Apple Moth is prevalent, there are indications that the inclusion of arsenate of lead with the Bordeaux will reduce the number of over-wintered larvae, and as these probably constitute the foundation of all later broods, a kill would be very helpful. During the very wet weather many growers concentrate on the scraping of their trees and fences. cleaning out of packing sheds, and boiling of all picking cases, and in this way enormous numbers of Codlin Moth and other larvae have been destroyed. The application of boric acid to trees affected with "cork" has been tried by a number of growers following the successful results obtained last year by the Council for Scientific Research.

Pollination.

Horticulturist (Tasmanian Depart- would be well advised to see that ample opportunities are afforded for Where profuse cross-polination. blossoming is followed by a poor set, lack of cross pollination may be sus-To test this out, jars conpected. taining blossom branches of other varieties may be placed in the trees; frequently the increased fruit set thus obtained is surprising, and if this is the case, branches or trees at intervals should be worked over by grafting or budding to suitable pollinating varieties during the season. Amongst the Pears, Williams and Winter Cole frequently fail to set well with their own pollen; amongst Plums, certain of the Gages serve as examples, whilst almost all varieties of Cherry will set much more freely when crossed, though with this fruit the desirable pollinating varieties are more difficult to find, owing to the existence of intersterility.

Grafting.

Many orchardists have made a start on the preparation of trees for reworking, and Pear grafting is already under way. The most popular scion varieties are Lalla, Granny Smiths, Crofton, Jonathan, Alfriston, Cox's Orange, and Golden Delicious, and the District Orchard Instructors have had their time very fully occupied in obtaining the necessary material. would be of great help to them if growers who are working would state the scion varieties they require as soon as possible, so that sufficient supplies may be obtained and held in cool store for their requirements.

Scions of Crimson Cox, Crimson Jonathan and Golden Delicious are very limited and applications for these are being dealt with strictly in rotation. In regard to request for instruction and advice in reworking methods, these have also been numerous, and any further growers requiring such should get in touch with the Orchard Inspectors for their district direct, or through the Department of Agriculture, so that suitable rosters may be arranged.

Export.

Practically no commercial fruit is now being held in growers' sheds, and the cool stores are being drawn on freely for Interstate supplies. The quality going forward has been favorably commented upon, though certain of the earlier export varieties are past their best, and must be carefully examined by growers before intended shipment. The strict N.S.W. inspection is being maintained, and has caused considerable worry and expense to growers. "When in doubt, throw out!" appears to be a sound axiom to adopt, and there are many growers who have done, and are doing, this, and have not yet had a case

Packing Classes.

The school packing classes have now terminated in many instances, but where possible, instructors are tinuing, and if time is available, classes of at least the keener scholars are still being held at intervals. Sur-With the approach of the blossoming prising progress is reported from all season for fruit trees (particularly sources, and many of the young the inventor of the alarm clock."

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packers are not only putting up a first-class case, but can pack each size of Apple with almost equal effi-

Neglected Areas.

About 60 more acres of neglected or uncommercial fruit areas have been removed during the month, growers are again requested to advise this Department of any such areas in their immediate vicinity so that necessary action may be enforced for the control of pests.

VALUE OF BEES IN THE ORCHARD.

Why Not Install a Few Hives?

T IS AGAIN SEASONABLE to remind the orchardist of the importance of bees in relation to his industry-now, with the Summer just starting, is a good time to establish a small apiary on his property. As agents of fertilisation of the blossoms, bees perform an important function for the fruitgrower, and the maintenance of two or three colonies per acre can be recommended as a means of materially increasing the quantity and quality of his crop. Apart from the benefit mentioned, such an apiary is also a source of small subsidiary income, as well as a wholesome food for domestic use.

The site upon which the apiary is placed need not be in the orchard. A small allotment of ground may be selected where the bees are not likely to be disturbed when cultivating. The land should be fairly level and well drained, and the hives should for preference face the north-east. A trellis of passion vines around the plot makes an ideal windbreak, and affords protection to the hives, both in Summer and in Winter.

The equipment required for the running of a small apiary is not extensive or costly. Bee-keeping is one of the most suitable sidelines to orcharding, since the hives do not require daily attention, although there are times when prompt attention is necessary, as during swarming, or when additional super space is required. It is also necessary for the owner to understand his bees and the general principles of bee-keeping. In the departmental bulletin "The Beginner in Bee Culture" (Farmers' Bulletin No. 129), the newcomer to apiculture will find a handy and authoritative guide. It is obtainable from the Department of Agriculture, Box 36A, G.P.O., Sydney, price 1/1, postage included.

Speaker, at a political meeting: "Can anyone tell me who has done most to raise the working classes?

Voice from the back: "Yes, guv-nor:

Dried Fruits News and Notes out being spoiled. Thus far an effective processing of paper trays for

SCIENCE ASSISTS CONSUMPTION

How the Laboratory Helps

finitely assist the fruitgrower other dried fruits. is a statement made by D. J. Whitney in a recent issue of "Cali- other dried fruits that show no spefornia Cultivator."

absolutely attained, is the attempt to prevent the spoilage of Raisins and other dried fruits in the process of drying when damp weather comes and they do not dry fast enough.

For example, suppose in producing Raisins, a grower has much of his crop on trays and a rain comes. Unless clearing weather comes soon and drying begins promptly the Raisins or other fruit in the process appear of are likely to spoil. The same thing of drying can stay moist longer with themselves.

HAT scientific investigations de-| may happen to Prunes, Apricots and

There are many lots of Raisins and cial sign of being injured by moisture, Amongst many studies made and closely affecting the fruitgrower, grown sufficiently on the skins to even though success has not yet been make them unsaleable. At least, the Government, under the pure food laws, prevents their processing and sale—and doubtless rightly so.

Two lines of experiment have been paper tray that can be used several times, or so inexpensive that it can be used only once. With such a tray

this purpose has not been found, but some satisfactory substance for the treatment of paper will doubtless be found in due time.

Another possibility is to spray the fruit with some material that will discourage the growth of bacteria or moulds and yet evaporate when warm weather comes, leaving no residue and permitting the fruit to dry in a sound, natural condition. So far such a material has not been found, but it may be found in due time. Even if it is not, all possibilities in such a line of work should be followed to the limit. One success to nine failures would seem to more than justify all

Increasing Prune Sales.

Prune growers have been having ε used to overcome this difficulty. One is hard time in the sale of their fruit the attempt to develop a mould-proof for many years and much work with Prunes has been done in the laboratory that should be of much importance, even though it does not now appear of value to the fruit growers

A very important thing is that erroneous ideas of food faddists were injuring the sale of Prunes. Work by the experts at the laboratory has checked this and given dieticians reasons to advocate greater use Prunes.

For example, Prunes have been said to be an acid producing food. Food experts throughout the land have been telling their patients or patrons to avoid Prunes if acid foods trouble them and naturally this has hurt the sale of Prunes.

Careful and thorough tests by the university have shown that Prunes are definitely not an acid food. Experiments with many individuals and under many conditions show that Prunes develop no acid condition in the blood. They have been used as part of an acid diet and part of an alkaline diet and give no tendency toward acidity in either case.

These experiments were carried on under conditions which make them acceptable to the American medical association. They are therefore "official." Food experts throughout the land now know that the good qualities of Prunes in the diet can be utilised without fear of acidity.

But work has been done beyond this, Much has been done to help the sale of Prunes. The tens of thousands of consumers who are "health food conscious" have something to make them want to buy Prunes.

Dried Fruits at the "Royal"

Board Chairman Predicts Bright Future.

ITH volumes of sales and price realisation on overseas markets comparing favorably with those of recent years, and with vineyard prospects very bright for the coming season, the Victorian Dried Fruits industry is in an improved position, stated Mr. J. M. Balfour, Chairman of the Victorian Dried Fruits Board, in commenting upon the exhibits at the Royal Show.

Production this year will be ahead of 1935 in spite of a reduction in the Currant crop. Already about twothirds of the crop has been shipped to overseas markets. As a comparison, the production of dried vine fruits in the past two years is interesting. Expressed in tons, the volume was:

Cur-Sul-Season. rants. tanas. Lexias. Total. 1935 . 7,885 23,255 **3,280 34,420** 1936 . 3,917 29,797 4,354

Dried Apricots are favorably received on the London market, and prices realised are comparable with those on the Australian market. Export prices for Prunes have not been satisfactory, but fortunately there is a growing demand on the domestic market for Prunes now that improvements in processing have been intro-

Whilst Mr. Balfour was pleased to report that the advertising programme undertaken by the Board had resulted in increasing the home consumption of dried fruits in Australia, thus conferring a benefit upon producers, the benefit has also been passed on to the public, which is becoming increasingly conscious of the dietary value of dried fruits in the daily menu. This fortunate and mutual result will be fostered by the Board in its efforts to serve both the producers and the public.

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DRIED FRUITS AT THE ROYAL.

Three Separate Exhibits.

Two stalls in the Government Pavilion and one selling stall in the Hall of Comerce drew much attention to Victorian dried fruits. In the Government Pavilion the exhibit of the Dried Fruits Control Board was spectacular and instructive, and this was supported by the exhibit of the Railways Refreshment Services. In the Hall of Commerce a of girls distributed many tons of dried fruits to an eager public. The slogan on the stand was "Raisins for Health." The requests for Christmas gift boxes, recipe books and personal interviews proved the interest in dried fruits that is definitely being shown by the public.

PROSECUTIONS IN N.S.W.

Illegal Traffic in Dried Fruits.

At the Temora Police Court on Tuesday September 15, 1936, L. A. Adamson, general storekeeper, Temora, was a total of £12 and £5/2/- expenses for purchase of dried Currants. Sultanas, Apricots and Prunes in contravention of Regulation 46 under the Dried Fruits Act. 1933. The dried fruits were purchased from hawkers, and had not been packed and graded; in accordance with the Regulations. C. W. R. Hammond, storekeeper,

Young, was fined £2, plus £2/8/- expenses at the Young Police Court on July 11, 1936, for selling dried Prunes not packed and graded in accordance with the Regulations.

At Central Police Court, Sydney, on September 8, 1936, Kelson Grey of Alexandria, was convicted and fined £2, with 8/- costs, for contravention of Regulation 30 in that he altered the grade markings on cases of dried Apricots from "Plain" to "2 Crown."

SALES IN LONDON.

The Commonwealh Dried Fruits Export Control Board advises that 920 tons of Australian dried fruits were sold in Great Britain during the week ended September 24, including 800 tons of Sultanas at an average price of £43/10/10 per ton. The remainder of the sales comprised 92 tons of Currants at £33/1/3, and 28 tons of Lexias at £46/10/9 per ton. The total shipments to date amount to 45,212 tons. The quantities afloat to, and unsold, in Great Britain represent the small balances of 4,195 tons Sultanas, 921 tons Currants, and 856 tons Lexias.

1936 IMPERIAL FRUIT SHOW.

No Dried Fruits Section.

The Annual Imperial Fruit Show which will be held at Liverpool (Eng.) from October 30 to November 7, will not provide for exhibits of dried fruits this year. This is reported to be owing to lack of support by exporting countries last year.

PATENTS GEORGE A.U'REN

PATENT ATTORNEY
HEATY HOUSE, 499 LITTLE COLLINS ST.
MELBOURNE.

New Zealand News and Notes

(By Our Correspondent.)

1936 Export Prices Unsatisfactory - Some Reasons Suggested -Necessity for Highest Quality Packs Only Being Exported - Pooling Unsatisfactory — Essential Relationship of Export and Local Marketing — The Citrus Embargo — Labor Costs Increasing.

to the new season's problems. The problems of 1937 will not be As far as the export is concerned, 1936 came to a nasty end, and most growers would be glad to forget it, if that were possible.

As far as New Zealand is concerned, the marketing of the cool stored fruit in England dragged out to a painful finish. In our August notes we mentioned that the New Zealand Fruit Board had cool stored heavy quantities, not with the idea of selling at. a higher price, but to prevent a further drop in a weak market. Whether even this policy has been payable is questionable, as the finish of the season has seen a price for Sturmer of 5/- to 6/-, which, after paying cool storage charges and allowing for the lines which would be showing deterioration, and which would have to be sold at even a lower price, the loss to the New Zealand grower has probably even been greater than if the shipments had been marketed immediately on arrival. It is easy for anyone to be wise after the event, and it is impossible to calculate to what extent the market was saved by the cool storage policy of the New Zealand Fruit Board.

Those who take an intelligent interest in overseas markets are trying to determine the reason for the extremely poor results of 1936.

It seems impossible to find any one reason that would account for the enormous difference between 1935 and Australian quantities were heavy, but the increase would hardly account for a difference in price, as far as New Zealand fruit is concerned, of 7/- to 9/- per box.

The market is inclined to blame the very wet Summer (the worst since 1880), the heavy quantities of poor conditioned fruit, the sale of which influenced the public demand, and the inferior fruit in which could be included stale Winesaps from the U.S.A., and certain shipments affected with Brown Heart from Australia.

The suggestion has been made that any cargo affected with Brown Heart should be dumped at sea rather than on to the market, as immediately the public have one experience of fruit suffering from Brown Heart they are inclined to turn their attention to other fruits.

With the strong competition which both Australia and New Zealand will, in the future, experience from South Africa and the Argentine, it is more than ever necessary that strict attention will have to be paid to the question of varieties, grades and sizes.

There are some shippers who have done reasonably well during the past season which has undoubtedly been the most disastrous for the Southern exporter yet experienced. Even 1926 and 1933, which went down in history as being bad, were not as disappointing as 1936. Growers

With Good Varieties,

and in that category can be included most of the early varieties, such as which have been sold during the low-

CTOBER signals the passing over | C.O.P., Worcester Pearmain, Alfriston, from the old season's worries and the more highly valued late varieties, such as Grannie Smith, Dougherty, have realised prices that will show at least some return. This again emphasises the necessity for the elimination of low grades and the poor quality varieties.

At one time New Zealand catered for a luxury market, but over a period of years grading standards have been gradually lowered as quantities and competition increased. It is a wellknown fact that fruit from young trees will grade out to a higher percentage of extra fancy than fruit from older trees, and this has undoubtedly had an influence in securing allowances in Government standards. Growers finding that their percentage of "Extra Fancy" fruit was dropping were naturally inclined to think that the grading standards were too high. Propaganda of this type will ultimately have its effect, and even an increased allowance to 2½ per cent. in russet, while possibly not being taken full advantage of when granted, will ultimately become very apparent as growers pack down to the grade.

Pooling Not Satisfactory.

The writer claims that pooling, as far as New Zealand is concerned, has not assisted the maintenance of high grading standards. This, we know, is a very debatable point, and there a distinct cleavage of opinion throughout New Zealand on this allimportant subject of pooling. However, we claim that if you take away from the individual a personal interest in the out-turn of his particular fruit, you lose that competitive spirit and individual initiative which means

Government Assistance Needed.

One leading grower in the Nelson district who had the opportunity of inspecting substantial quantities the New Zealand pack during 1936 is reported to have stated that the quality is very much below previous years, and New Zealand could not expect to secure the best of the English trade if that was the class of pack that was being offered.

The necessity for some tightening of the grading standards may be disputed, but only because the grower has at present no outlet in New Zealand to dispose of the fruit which is left behind.

The necessity of co-operation between export and the local market is becoming more apparent each year.

It is reported that a deputation, representative of all export districts in New Zealand, will wait on the Government some time during September with a request for financial assistance to the fruit export trade. It is now apparent that many exporters will find it difficult to remain in the export industry without Government assist-Until accounts are finalised it ance. would be unwise to hazard the amount necessary to cover the 1936 deficits. but that they will be substantial is agreed by all who have studied the trend of the market and the quantities

price period. The Minister of Finance has already made a promise that the Government will do something, but if New Zealand is to maintain its position in the export markets it is essential that those concerned have some immediate knowledge of what can be

The Citrus Embargo.

The Government Commission, which is taking evidence on the local marketing of fruit in New Zealand has completed taking evidence in all provinces other than Wellington. has been taken in camera, so that little is known of the many suggestions which would undoubtedly be put forward. The Australian delegation arrived by the "Marama" on Monday, 14th. It can be taken for granted that if they are unsuccessful in their mission there is little likelihood of N.S.W. or Victoria entering the N.Z. citrus market for many years to come.

There has recently been a very definite shortage of Oranges in New Zealand, and many complaints are being voiced through the Press.

South Australian Oranges have been advanced 1/- per box, and the best counts are being sold at 22/-. According to size, this means 3 to 6 Oranges for 1/-, so it is obvious the New Zealand public is paying heavily for the privilege of having an embargo, and consumption is correspondingly reduced.

With the development of an export trade in Potatoes to South America. the Sydney market for New Zealand Potatoes loses a certain amount of its value. The price of Potatoes in the Sydney market is £7/10/- per ton. At this figure it is of no value to New Zealand, in fact, after allowing for duties, freights, etc., anything below £9 to £10 per ton would show very little margin. Local supplies are approximately £6 to £6/10/- per ton, F.O.B., S.I. If any bargaining between the respective Governments is on the basis of reciprocity, it is difficult to see what N.S.W. has to give away, other than to offer a market for Potatoes and Apples, and as far as the latter is concerned, it can be expected that Sydney would be only a very occasional market. Undoubtedly the delegation has a difficult task, and while they will secure a lot of sympathy in New Zealand, there are many

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who are not optimistic of their possibility of success.

Growers thoughts are gradually turning to the

Coming Season's Crop.

Spraying operations have commenced, pruning is well in hand, but there are many who are backward, and will have the usual September rush. The spraying of stone fruits is under way, and it will not be long before spray pumps are working over-time in the Apple districts. Wet weather has held up cultivation, and it is to be hoped that the present wet period is not succeeded by those drying winds which make cultivation so difficult in some areas.

With increasing labor costs, growers must face the necessity of mechanising their orchards if they are to keep production costs within reasonable bounds. If the money was in the industry there would be a big expenditure on pumps, graders, rotary hoes, etc., but until some idea is available of the extent of the assistance to be given by the Government, the conservative grower will save his finance until prospects are a little brighter than they are to-day.

Stone-fruits growers can expect a reasonable return for their efforts, as the buying power in New Zealand has been increased with the expansion of the Public Works and housing programme of the Government. situation is totally different for the exporter, who has to face rising internal costs with no compensation from the markets for which he is catering.

A fresh development in the labor market is the formation of a Union of orchard workers. If the employers have to meet the wages demand being made by the Union, there are many who would do better as orchard employees than as employers. The industry has never been in a worse position to meet high wages as it is to-day, and if the workers are successful in their application we foresee a much greater portion of the work being done by the grower and his family. For the man with no family and a large area the future may be impossible.

14/9/36.

QUEENSLAND

Cold Storage in the Stanthorpe District

GROWER'S SUCCESSFUL EXPERIMENT

FEW years ago, a proposal for several hours per day are sufficient to Stanthorpe (Queensland) district, was rejected by the growers. Cool stores, in which a well-insulated building is ventilated by natural methods, have been used with some success for storing grapes, but Mr. H. Archibald is the first grower to show his faith in refrigerated storage, by erecting an up-to-date cold store, with a capacity of 2,000 cases, on his orchard. This was in operation last season, and he has been well repaid for his enterprise.

The cold store has been found to be particularly useful for storing Peaches and Plums over the short gluts which commonly occur, with these soft fruits. During the glut of early Plums last December, Mr. Archibald held his fruit for a week or ten days in the cold store, and obtained about 2/- a case above the price that he would normally have obtained, had he not been able to withhold the fruit from market. The storage of Apples (especially Graventesins) for a short period is also profitable in many cases. If fruit that has just been stung by fruit fly is put in cold storage at once, the eggs will be killed in a few days, and thus a great deal of fruit can often be saved instead of becoming a dead loss. The owner of this cold store claims that his profits on the Plums, covered the total cost of operating the plant throughout the

The plant, which cost £1,000, has a capacity of 4,000 cases, although at present the refrigeration chambers will hold only half this amount. The walls and floor of the chambers are a foot thick, and are filled with sawdust as an insulator. The compressor is driven by a 7 h.p. Diesel engine, and the direct expansion system is used. In the hot weather, when the plant is in continuous use, it is run for up to fifteen hours a day, but when both rooms are full and properly cooled,

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a co-operative cold store in the hold the temperature. Humidity must also be carefully watched.

> Towards the end of the season, the owner was carrying out some interesting experiments on the storage of Beans and Tomatoes. He found that these vegetables could be stored for two weeks and then sent to Brisbane safely. However, there was a danger of Rust developing in Beans; dipping in a suitable disinfectant may be necessary to prevent this. As these vegetables are subject to periods of glut, cold storage should be profitable. A charge of a penny per case per week is made when storing fruit for other growers.

A refrigeration plant costs twice as much to run in the Granite Belt as in Brisbane; the higher altitude and lower temperatures cause greater fuel consumption, and the cost of fuel is greater. If the store were larger, and a larger refrigeration plant used, it would be necessary to employ an engineer at award rates; to make this worth while, a very large capacity would be required. In most parts of the Stanthorpe district, the orchards are rather scattered, and therefore a few cold stores of large capacity would not be as useful as a number of smaller ones, more widely distributed over the district. This indicates that large co-operative cold stores would not be as economic as smaller private stores, and the success of Mr. Archibald's experiment is likely to result in other orchardists of the Stanthorpe district following his example.

POWER ALCOHOL.

The Queensland Cane Growers' Council has issued a booklet to producers' associations throughout Australia on the subject of power alcohol from primary products. The booklet includes: (1) Letter from the Queensland Cane Growers' Council to sundry primary producers' organisations; (2) Letter from the Cane Growers' Council to units of cane growers' organisations; and (3) correspondence passing between Queensland Cane Growers' Council and the Commonwealth Government and Commonwealth Goverment officials' report.

The information published is of great interest and reveals the thoroughness with which the Federal Government has investigated the subject of power alcohol. Despite this report, however, and the possibilities which are mentioned as to the development of production of oil from shale, the Cane Growers' Council is convinced that a very exhaustive en-quiry is warranted as to the development of a fuel supply from primary products.

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NITROGEN FERTILISERS AND SOIL REACTION

In a recent article in the Journal of the Ministry of Agriculture, Eng-land, Professor J. A. Scott Watson, Professor of Rural Economy at the University of Oxford, states that in choosing a nitrogenous fertiliser, farmer is largely influenced by the suitability of the product for his particular purposes, and by a comparison of its price with that of other fer-tilizers on the basis of the cost of the unit of nitrogen. Emphasis is placed on the fact that due consideration is not always given to the varying effect of the different fertilizers in wasting or conserving, as the case may be, the lime reserves of the soil. The maintenance of a correct soil reaction in many cases necessitates the periodic application of lime, which involves expenditure. As some nitrogenous fertilisers are acid in their reaction, whilst others, like Chilean nitrate of soda, are alkaline, it follows that the use of given fertilizer eventually causes a definite increase or decrease in the necessary expenditure on lime.

The article states that one ton of Chilean nitrate of soda conserves 5 cwts, of carbonate of lime, whereas a similar application of other forms of nitrogen causes a wastage of 21 cwt. On the assumption that carbonate of lime, by the time it has been applied to the soil, has cost the farmer 30/per ton, it is found that the ton of Chilean nitrate of soda causes a reduction of 7/6 in the farmer's lime bill, whilst in the other case the wastage of 21 cwt. represents an increase of £1/11/6 in the necessary expenditure on lime.

This aspect of nitrogenous manures should be of particular interest to Australian primary producers, as it is well known that many of our soils in the higher rainfall areas are moderately to strongly acid in their

VACUUM AT THE ROYAL SHOW.

The part played by petroleum in world-wide problems of transport and industry was the theme of Vacuum Oil Company's attractive display at this year's Royal Agricultural Show.

The world of transport was represented by the modern car, Interstate and overseas liners, and the aeroplane. A striking La Salle car finished in chromium, and black was the centre piece of the exhibit.

Perfectly constructed scale models of the T.S. "Taroona" and the M.S. "Kanimbla" were exhibited, while an oil painting of the famous "Queen Mary," with clever back lighting, represented the line of vessels, lubricated almost exclusively by Vacuum, which have captured the much-prized Blue Riband of the Atlantic. Revolving spheres and mirrors with ingeniously placed lights told of the importance of Ethyl in the high compression engines of the cars of to-day, and of the advantages that lie in correct Mobilubrication.

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lotor Cars, Fruck

Adjust the Spark| Wheel Wobble

Knocking Can be Prevented.

Motor-car engines are very liable to knock if the driver attempts to force their speed up from a slow pace in top gear without using his spark lever. The reason for this becomes obvious when one considers the condition ruling in the inlet manifold and cylinders during acceleration. As the engine is running at low speed on a nearly closed throttle the cylinders are only partially filled, and as the gas is mixed by the slow-running jet it is richer and slower burning than the normal supply. When the driver suddenly steps hard on the accelerator the restriction is taken as tor the restriction is taken off the incoming gas and the cylinders receive their full quota of fuel. Unfortunately the mixture is by no means homogeneous, and as the air commences to pour into the cylinders before the comparatively heavy petrol vapour has a chance to get under way the mixture is weakened below normal and knocking is set up. If, however, the driver retards the spark just before he pushes the accelerator pedal down, by providing a late spark he counteracts the rapid burning tendencies of the weakened fuel, and thus knocking is avoided. Immediately after the accelerator has been pressed down the driver should commence advancing the spark, moving the lever gradually to the advance position to suit the rising speed of the engine. The secret of success in this connection is to make the movement of the spark lever synchronise perfectly with the demands of the engine, and if this control is expertly handled the acceleration will be sweet and astonishingly rapid.

A MILLION SPARE PARTS.

The spare parts department General Motors-Holden's Ltd., at Fisherman's Bend, Melbourne, is fast becoming shipshape. This department carries over a million pieces in stock in a range of 50,000 different items. Even old model replacements, as far back as 1918, are still obtainable by the 500 dealers, and more garages throughout Australia who occasionally require a replacement part. The department requires a staff of 116 people, and the stock carried is estimated to be worth £300,000. Replenishments are made monthly.

LOOK AT THE EXHAUST BOX.

If an overhaul of a motor vehicle fails to restore the efficiency of the engine, particularly in the case of a fairly old model, the exhaust box should not be overlooked. It should be cleaned out, for a choked exhaust system creates back pressure and ruins engine efficiency.



BATTERIES-RELIABLE SERVICE

AT
Auto Electric
Service Pty. Ltd.

Several Causes.

The trouble from wheel wobble that was so frequent with light cars not so long ago, is now practically overcome by the improvement that has come to motor car and truck construction. But, even nowadays, sometimes wobbles are the result of inexcusable carelessness on the part of the driver rather than upon the machin-Front tyres inflated unevenly will often give a wobble effect and will also cause uneven or rapid wear.

Wrong alignment will sometimes cause or increase a wobble, as will also a bent axle. Loose steering connections will often result in wobble which is the result of lack of control. But again, there are other causes, mostly all remediable.

If any wobble is noticed the best course for the amateur to follow is to take his car to a service station which has full equipment for making precise tests. Steering dampers and other gadgets are obviously merely palliatives, and can at the best only check and do not cure an inherent fault. On cars which have semi-elliptic front springing the setting of the springs after long use may upset the axle tilt which can be corrected either by setting up the springs or inserting wedges between the spring and the axle, and it has also been found that unbalanced front wheels, lack of balance due either to irregularly worn tyres or the insertion of a heavy "blow out" patch can cause wheel wohhle

CHEVROLET TRUCK ENGINES.

High Efficiency Claimed.

Preston Motors Pty. Ltd., Metropolitan distributors of Chevrolet trucks inform us that the special truck engine in the Chevrolet commercial model has been proved by more than two million owners the world over, and to-day the Chevrolet truck is selling in bigger numbers than ever.

The engine develops high power at low speeds, which is one of the most important features in a truck engine. Another important feature of this truck is that it has a full floating rear axle. This, coupled with the improved rear axle housing makes the rear axle assembly practically proof against all trouble.

The Chevrolet is available in 30 cwt. and 2 ton ratings, and the Maple Leaf model in 21 tons, thus covering 90 per cent. of the heavy transport

A notable feature of the Chevrolet truck engine is that it has full length water jackets ensuring cool running under all conditions and high economy in oil, owing to the fact that the lubricant never has the opportunity to become overheated.

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CARE OF RADIATOR.

A supply of clean water in the radiator is as important as the petrol and oil. Inspect and fill the radiator before the car leaves the garage; frequently when on long tours; and every time a halt is made for oil and petrol.

Always use clear water in the radiator. Rain water should be used if obtainable, as it leaves less deposit than tap water. Never pour cold water into the radiator while the engine is hot as it may crack the cylinder block. Once a month open the radiator cock, and allow the water to drain away. If it is very dirty, flush the radiator with clean water.

If a leak occurs, it is better to (Motor Notes continued on page 28.)

make a permanent repair than to use anti-leak compounds or similar substances, as they foul the radiator and prevent efficient circulation of the

MORE BRITISH CARS.

In Ceylon there are over 27,000 motor cars. Of these 13,000 are of British manufacture, 2,000 Canadian, 9,000 American, 1,000 French, 200 German, 1,000 Italian, 100 Belgium, six Austrian, three Japanese, two Dutch, and a number unspecified. Morris Motors Ltd., of Cowley, England, claim that their cars beat all other English car sales, 2,842 Morris cars were sold and delivered in one week.

Save Money with Chevrolet The Cheapest Full-Sized Utility



Illustrated is the Chevrolet "6" Open Delivery with Coupe Front.

When you own a Chevrolet Utility it saves you money—on the day you buy and every mile you drive. The fact that Chevrolet is the lowest-priced full-sized utility is your first saving. Then, you'll find that Chevrolet is the lowest consumer of oil and petrol you've ever had. Next, you'll realize that Chevrolet is the most powerful in its price-class. And, finally, when you own a Chevrolet, its utter dependability, long life and low maintenance cost will satisfy you of your wisdom in buying it, as it has satisfied more than two million owners throughout the world. Before you buy your next utility come in and try the latest 1936 Chevrolet.

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The Chevrolet engine is a real worker, built for long life and hard toil. Its full-length cylinder-cooling, thermostatic heat control, crankcase ventilation, spray-cooled exhaust valves and pressure steam lubrication are among the features which make it the longest-lived of truck engines. The Chevrolet engine is built to last the life of the truck. Chevrolet Trucks range from the popular 30-cwt. model to the 5-ton Mapleleaf semi-trailer.



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Move.

Now at Fisherman's Bend.

Two important events happened for General Motor-Holden's Ltd. since our last issue. They were the return of Mr. L. J. Hartnett, managing director, who recently visited America and Europe to obtain the latest information regarding to most modern methods of automobile manufacture. preparatory to the equipment of the new plant at Fisherman's Bend.

The removal from City-road closed ten years of service to the industry, during which many thousands of cars and trucks have been sent out on their mission of pleasure and work to thousands of grateful Australians.

The new plant will offer better facilities for assembling the big range of cars and commercial vehicles than was possible under the more restricted and not wholly suitable temporary premises at City-road, which have had to be extended time after time to meet the growing demand of a motor conscious public.

In connection with the big move, the management of General Motors-Holden's Ltd. have issued an attractive and descriptive booklet styled "The changing Trend." This gives a short history of the development of motoring in Australia, and from the growth of the now-famous Holden's 40-acre motor works in Adelaide, to the latest development of the combined operations of the greatest motor organisation in the Southern Hemisphere.

Some of the facts regarding the new plant are particularly interesting. Cost to date over £400,000. Administrative headquarters of the company in Australia. Here will be manufactured all commercial bodies for Australia as well as the assembly of all car and truck chasses for Victoria, Tasmania and South Australia. It will also be the centre of all future manufacturing development.

The plant at present consists of four main buildings and four sub-sidiary service buildings. The administration section has a total area of 50,000 square feet. A cafeteria for employees has a seating capacity for 200 people at once. The main factory building is the largest singlestoried building in Australia, and has a total floor area of over 72 acres. The whole plant has been designed to facilitate factory processes, and represents the ultimate in factory plan-

Statistics are not always dry reading, as the following condensed report shows: Number of Australian shareholders, 1,550, representing share value of over £500,000. Number of employees in 1935, 7,421. Wages paid in 1935, £1,374,686. Paid for Australian-made material £1,750,000. Customs duties paid in 1935, £1,250,-000. Number of vehicles sold in the past ten years 178,792.

Australia in general, and Melbourne in particular, welcome this tremendous development of one branch of secondary industry, and this brief story deserves a record in "Fruit World and Market Grower," whose readers are well represented in the use of motor transport.

Heavy Frost Damage Sultana Crop at Berri.

Owing to a severe frost in the Berri Irrigation Area on September 24. many vignerons have suffered heavy losses.

The damage was severe in patches, particularly at Monash and Glossop, and lighter at Winkie. The Berri settlement itself was not seriously af-

The destruction is believed to be as severe as any frost since 1927, when most of the Sultanas and Currant crops were destroyed.

In more than half the crops the damage was mainly confined to Sultanas, which in some cases had already been reduced by a minor frost a few nights earlier.

Heaters placed in the vineyards in Red Cliffs saved the crops there.

New South Wales.

Frosts at the end of September caused much damage at Lavington, near Albury. The Apricot crop was wiped out. Peaches were greatly damaged. Young Tomato plants which were not covered were destroyed.

At Griffith, Grape vines were cut back by frost, and Lemon crops damaged.

At Leeton the coming Sultana crops were severely cut back. So far the Peach crops are not seriously affect-Tomatoes and Potatoes suffered

Victoria.

Elmore: Tomato plants seriously damaged by frost.

Echuca: Tomato plants and deciduous fruits seriously affected. Local Apricot crop destroyed.

Later-

There was a disastrous frost at Lecton and Griffith, September 25. Many growers have lost their crop of Grapes, Apricots and Tomatoes.

Settlers on the M.I.A. are approaching the Government for immediate assistance, and the Acting Premier (Mr. Bruxner) has promised favorable consideration.

In the Murray Valley around Berri it is estimated that 50 per cent. of the Sultana crops have been ruined.

There were several losses around Renmark, also Clare, Morphett Vale, Nuriootpa, Angaston and Lyndoch.

At Lights Pass Apricot crops have been practically wiped out and almost all of the wine grapes.



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General Motors' Big Frost Damage The Market Grower

SOYA BEAN

Many Uses Has

HIS member of the Bean family Manchuria Northern China.

In U.S.A. Soybeans are now being used in the manufacture of automobile parts and paints. Gear-shift knobs, engine distributor covers, and other parts are made from Soybean Many paint manufacturers use from 10 to 20 per cent. of Soy Bean oil instead of imported Linseed oil. They find that proper amounts of Soybean oil prevent white paint and enamel from turning yellow. The oil has been used for centuries in the making of Chinese lacquers.

Glue made from Soybean meal will not dissolve in water, and is valuable in manufacturing plywood for packing cases. Lecithin, a dark brown liquid extracted from the Soybean, gives chocolate candy a gloss. Gumdrop makers put in a drop of this substance to prevent hardening in storage. Cotton textile plants produce a supple finish to their goods with lecithin. Tanneries want their chrome leather to take up plenty of grease. They use lecithin to assist the process. Lecithin is also found in egg volks. but egg yolks are too expensive as a commercial source.

From the vegetable milk of the Soybean comes casein. It is used in sizing paper, textile dressing, waterproofiing, and in the manufacture of

Food uses of the Soybean are manifold. Soybean flour is used in making bread, cakes, ice cream cones, ice cream powder, macaroni products, wafers and meat products filler. Refined Soybean oil is an important constituent of salads and cooking oils. Soy sauce, a dark brown liquid, is prepared from a mixture of cooked and ground Soybeans, roasted and pulverised wheat, salt and water, which is inoculated with a rice ferment culture and left from 6 to 18 months in vats or cakes.

Experiments are also being conducted by the Bureau of Home Economics and the Bureau of Plant Industry to determine which varieties may be used as edible green vegetable Beans. Some varieties are very palatable and may be used in the same manner as the Green Pea or Lima Beans. The Beans shell easily after the pods are boiled for about three minutes.

These many uses, many of which were at the time unknown, caused its introduction into U.S.A. in commercial quantities some 30 years ago, since when its cultivation has been developed, and has increased in a remarkable manner, until now 5,000,000 acres were under crop in 1935, a third more acreage than in 1934.

As showing its absorption into the industries of the country, chemists have now discovered over 300 as widely assorted uses for the Soya Bean as bread, flour, varnish, and motor car parts of all sorts. The Ford Company has extensive holdings growing the Beans for their own factory uses.

In Australia, the Bean is little hails from the Orient and the Far East, where it is cultivated made in Northern N.S.W. and Queensand land, but have not yet developed into any large quantity of crops. Since Australia can supply any climatic conditions comparable with most countries, also soil that will give almost any germination, the only difficulties in the way of successful cultivation of the Soya Bean would seem to be the inoculation necessary for propagation. At present importations are all from Manchuria, and are re-stricted to a few tons per annum, mostly absorbed in the manufacture of sauces.

IMPROVING THE POTATO CROP.

N.S.W. Competition Results.

In a Potato crop-growing competition which embraced representative areas of the Western District in N.S.W., an average yield of 7 tons 9 cwt. per acre was obtained from the twenty-seven competing crops. The average for the four crops which reached championship class was 9 tons 15 cwt., the yield of the winning crop being 11 tons 15 cwt.—a record for the Western District. It is interesting to note that the average yield of the championship crops from the inauguration of the competition in 1929 to 1935 was 8 tons 13% cwt.

Control of Scab.

The benefits to be gained by dipping the seed with the acidulated corrosive sublimate dip, as recommended by the Department of Agriculture, were well demonstrated this year. At Orange all the growers who used the dip harvested relatively clean tubers. while those who neglected to do so had a fair percentage of "scabby" Potatoes. Growers in general should remember that dipping not only improves the appearance of the marketable tubers, but increases the yield as well. The expense and labor involved is well worth while.

Methods Have Improved.

The wider distribution of better quality seed and the improvement of growers' methods are the chief benefits derived from competitions such as these, says the "N.S.W. Agricultural Gazette," and it is pleasing to know that in the Western District Potato competitions have achieved a fair measure of success in these directions.

Most growers now realise that the Potato crop is fairly exacting so far as the "condition" of the soil is concerned, and more attention is being given to correct rotation and management generally than hitherto. The utilisation of old Clover paddocks for Potato growing is a sound practice now being adopted by odd

Generally speaking, the cutting quality and appearance of the tubers were very good. Very little second growth was in evidence, and in most cases the Potatoes formed an attractive commercial sample.

Australian Apple and Pear Exports

Review of 1936 Season

(By Mr. J. W. Barker.)

R. J. W. BARKER, of the firm | change of trade arrangements beof Messrs. Barker, Green and Parke Pty. Ltd., Collins-street, Melbourne, recently returned from a trip to Great Britain and Europe. He was in London during the Australian Apple and Pear season, and witnessed many sales of Australian fruits.

Speaking of the Pear market, Mr. Barker stated that there was a steady demand throughout the season, prices realised being fair to good. He directed attention to the bad effect on Pear shipments generally as a result of the shipping to England of Pears of unknown and unwanted varieties, such as Vicar of Winkfield, Glou Morceau, Conference, Keiffers, Napoleons and others which are labelled in fruit brokers' catalogues as follows:— GS, FM, EB, BBP, EPB, BDP, and Many of these varieties have been shipped to the English markets, with disastrous results to the shipper, and unless they are eliminated from export they will have a detri-mental effect on the other varieties which are sought after.

The first shipment of Victorian Pears other than W.B.C.'s arrived in England on the "Otranto" on March 30. They were mostly Packhams, and realised from 9/3 to 12/6. Prices for Pears during April were as follows:—Jos. to 14/-, B. Bosc 11/- to 12/-, Packhams 11/-, Broome Park 9/-, Tasmanian Pears, including Ex. Fancy Comice, realised 16/6, B. Bosc 10/- to 11/6, Beurre d'Capiaumont 9/-, Easter Buerre 8/- to 8/6, Giblin's Seedling 8/6, Clairgeaus 8/-. Varieties such as Packhams, Jos., Winter Cole, Winter Nelis, B. Bosc, main-tained their prices over the next few months, with the exception of a drop during the latter part of May of about 2/- to 3/- on some varieties, but they recovered after this period, and the prices were fair to good all along.

Mr. Barker directed attention to the severe competition which is being received by Australian fruits from the Argentine. Because of the inter-

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tween the Governments, Germany is drawing its supplies from Chili.

1936 Apple Shipments.

Speaking of Apples, Mr. Barker stated that the season opened in April with light arivals of Jons., Cleo. and Dunns; these sold at from 8/- to 11/6 per box. The market, generally, weakened as the season advanced, and larger quantities of Apples were delivered on to the market. During the second week in April, 417,000 boxes of Apples, including supplies from Australia, the United States and the Argentine, and fair quantities of English Bramleys (ex. cool store) were on the market; these supplies, combined with cold weather and depressed market conditions generally, had a bad effect on prices for Australian

During the third week in April, 316,000 boxes of Apples reached London, of which over 230,000 were Aus-

tralian. During this period Jons., ties of Apples down was the arrival of Dunns and London Pippins sold as low as 5/- per box, Cleos. 6/- up- There was definite need for spreading wards, and G. Smith from 7/9.

In the fourth week in April the weather improved, and the demand for Australian fruit and prices were better. Heavy arrivals commenced again the first week in May, including shipments by the "Albion Star" and the "Raranga." Portion of the cargo of these two ships arrived in bad condition, and Mr. Barker formed the impression that the fruit had been carried as ordinary cargo, and not in a refrigerator. Supplies of United States and Argentine fruit were still on the market, and these, combined with the arrival of unwanted varieties, such as Duke of Clarence, Ribston Pippin, Pomme de Neige and Geeveston Fanny, had a depressing effect on the market.

Mr. Barker stressed the need for eliminating from the export list such varieties as those referred to in the foregoing paragraph. It was possible to purchase these from any distributor in Covent Garden for about 4/per box, hardly sufficient to cover the ocean freight per case.

Another factor which had the effect of bringing the prices of good varie- import Apples from Chile. Mr. Bar-

the arrival of steamers over regular intervals.

Loss of Continental Markets.

Another factor which was responsible for the depressed values and low prices of Australian Apples was the total loss of the German market, and the partial loss of the Swedish and Danish markets. The German market, which at one time distributed about one million cases of Australian Apples annually, was lost to the Australian fruit industry because of the failure of the Commonwealth Government to enter into a trade agreement with Germany. Mr. Barker had made enquiries amongst Hamburg fruit brokers, and they had informed him that they were most anxious to do business with Australian fruit exporters, but they could not do so, asthe German Government compelled them to deal with the countries that purchased from Germany.

During this year Chile had been purchasing certain goods from Germany, and this enabled the fruit brokers to obtain import permits and currency licenses, so that they could



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28/-, Australian curréncy, per box. In his opinion, the Chile Apples left a good deal to be desired, and were definitely not up to the quality of the Australian Apples. Hamburg fruit brokers had suggested that deals be made with them by means of barter, but there were difficulties in the way of this, owing to the German gold standard of currency, and the high tariff placed on her goods coming into Australia. It would seem that the German market for Australian Apples and Pears is definitely lost to Australia unless the Commonwealth Government can arrange some trade agreement with Germany in order that we can regain our share of the German market.

The remarks which apply to Germany also apply to Denmark. This country was only allowed to take into Denmark about 10 per cent. of the quantity of Australian Apples that it had already purchased from Australia, the balance of 90 per cent. having to be disposed of in other markets. Sweden has also been good buyers of Australian Apples and Pears in the past, but at the present time the only fruit from the Commonwealth which was reaching Sweden was from South and Western Australia. This was due partly to a barter arrangement put through by the South Australian Government, which enabled Sweden to import quantities of South Australian

Freight Reduction Essential.

Speaking of freights, Mr. Barker directed attention to the fact that prior to the war the freight on a case of fruit was 2/8 to 2/10 per box. The rate of freight at the present time is 4/- per dox, Australian currency.

When it is realised that large quantities of Australian Apples realised only 4/- to 5/- per case on the English market, and that the average price for Australian shipments from all States would not be more than 6/-, some idea can be formed of the severe losses which must have been sustained by both shippers and buyers.

The Commonwealth Government have endeavoured to relieve the situation by a series of grants over the past few years, but this did not appear to be the best method to deal with this matter.

Another aspect of the position was that merchants in England and Australia had bought large quantities of fruit this year, in fact, over 90 per cent. of the fruit sent to Great Britain this year was purchased outright from growers. Many of these merchants must have suffered severe losses, and will naturally hesitate to operate during the coming season.

The loss of the German, Swedish, and Danish markets to Australia has

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England of to the local markets. A conservative estimate of the amount of money lost to the Australian fruitgrowing industry would be £1,000,000. In fact, the amount is probably larger than this, because, in addition to los-ing a definite market capable of ab-saving, and some definite steps must tries. For instance, in the United

markets naturally reduced the prices obtained for fruit in these markets. trol.

The time has undoubtedly arrived when the Commonwealth Government countries going into Great Britain must seriously consider whether the under the Ottawa agreement did not

ker has seen Chile Apples selling at | diverted over one million cases of | sorbing over one million cases of fruit, | be taken by them to help a primary the Hamburg market at about 15/- to | fruit from these markets either to | the shipments being diverted to other | industry which is the victim of circumstances entirely beyond its con-

The tariff placed on fruit from other



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416,802

1.207

26.978

45,782

106,752

630,106

424

100

120

261

1.043

States, the Government of that country subsidises snipping companies up to a figure that covers the tariffs which Pear Exports have been placed on United States

In conclusion, Mr. Barker contends that if the Apple export industry is to be continued, consideration must be given to the following aspects:—

- (1) Reduction of freight by means of a subsidy to shipping companies in order to reduce the freight rates on Australian Apples by at least 1/- per
- (2) Better distribution in regard to the arrival dates of steamers into the United Kingdom, thus spreading more evenly the arrival dates of Apples from all the States of Aus-
- (3) A higher duty against foreign competition in the United Kingdom during the period in which the Australian Apples are marketed in Great Britain. This can be brought about under the Ottawa Agreement.
- (4) The elimination from shipment of unwanted varieties, which tend to reduce the price for those varieties which are sought after.

TRADE WITH NEW ZEALAND. Wellington:

A strong case for the resumption of citrus export from N.S.W. to New Zealand was put forward when the N.S.W. delegation, Messrs. J. Heane, E. E. Herrod, and P. S. MacDermott, visited the Dominion in September.

Delegates pointed out that in 1932 the total exports from all Australian States were 223,631 bushels at a total cost of £134,178 (estimated on a selling price of 12/- per bushel), while in 1935 the number of bushels was 163,146, which at a selling price of 18/-, cost the retailers £146,831. That is, from Australian sources alone, the New Zealand public received 60,485 bushels less, but paid £12,653 morewhich is to say that for a quantity, 27 per cent. less a cost 9 per cent. higher was paid. As Sydney is the departing point of Australian fruit, naturally N.S.W. could supply them with the cheapest fruit.

Regret was expressed at the publication of a report favoring an enquiry by the Tariff Board into the duty on N.Z. Apples entering Australia, though apparently no mention was made of the fact that the Min-ister for Customs had decided against the referring of this matter to the Tariff Board.

WESTERN AUSTRALIA.

At the annual meeting of the W.A. Fruitgrowers' Association, held at Mt. Barker on September 17 and 18, it was decided to continue the use of the redwood case, to protest against the sale of immature citrus fruit, to secure the selling of Apples, Pears, etc., by count instead of weight. Grades for local Apple marketing were decided upon. The Apples Sales Board was thanked for its valued services.

Items for the Australian Apple and Pear Export Council included request for fruit freight reduction, Federal Govt. assistance for funds for adver-tising to increase Australian fruit consumption, the need for trade agreements with Continental countries, self registering thermometers in refrigerated holds of overseas fruit carrying steamers, that "fancy" Jonathans should have 30 per cent. color. Messrs. J. McN. Martin and N. A. G. Brockman were elected delegates, with Mr. H. W. Soothill as adviser.

Mr. Martin was re-elected president, and Mr. W. P. Scott vice-president.

Pear Exports

Competition from the Argentine on the English and Continental Markets.

Mr. J. W. Barker recently made close enquiries into the competition which is developing each year from the Argentine. Larger quantities are being forwarded, particularly to the Continental markets, and because of the trade arrangements existing between these countries and the Argentine, it is possible for the fruit brokers to obtain import and currency licenses enabling them to obtain from the Argentine Apples and Pears which are ready for shipping at the same time as Australian Apples and Pears.

The fruit traders in the Argentine are also making strenuous efforts to develop this trade, and this is demonstrated to some extent in a booklet issued by them recently containing fifteen reproductions of natural color photographs of selected specimens of the principal Apple and Pear varieties grown in the Rio Negro districts. Each page in this booklet depicts in colors, a complete Apple, together with the half of an Apple, cut open, showing the inside quality of the fruit. Varieties, sizes and shipping dates shown in the booklet are as fol-

Delicious and Red Delicious, ready for shipping from early March, available sizes, 72-180 fruit per boz; Jon., ready for shipping from February, available sizes, 100-210 fruit per box; King David, ready for shipping from end February, available sizes 100-210 fruit per box; Glengyle Red, ready for shipping from end March, available sizes, 56-180 fruit per box; Rome Beauty, ready for shipping from end March, available sizes 56-180 fruit per box; Staymans Winesap, ready for shipping from end March, available sizes, 56-162 fruit per box.

Pears .- B. D'Anjou, ready for shipping from end March, available sizes, 54-110 fruit per box; B. Bose and Doyenne du Comice, ready for shipping from end March, available sizes, 54-120 fruit per box; Packham's, ready for shipping from end March, available sizes, 36-180 fruit per box; Passe Crassane, ready for shipping from beginning of April, available sizes, 36-110 fruit per box; Williams (Bartlett), ready for shipping from end of January, available sizes 60-150 fruit per box; Winter Bartlett, ready for shipment from beginning April, available sizes 80-210 per box; Winter Nelis, ready for shipping from be-ginning of April, available sizes 90-195 fruit per box.

It will be noted from the foregoing that practically every variety of Apple and Pear suitable for export, with the exception of Granny Smith, re available for shipment to European and other markets, and the sizes are varied to suit requirements of each

AUSTRALIAN APPLE AND PEAR EXPORT.

The following are the official figures supplied by the Dept. of Commerce regarding Apples and Pears exported from Australia in the 1936 season.

Apples.

January to July inclusive.

| N.S.W | 65,428 562,505 17,571 326,333 626,200 2,566,423 | 1,692 48,016 — 115,902 | | 20,313 9,795 6,944 17,638 42,203 6,293 | | 45,621 4,454 4,454 | 18 do L 93,348 628,957 24,924 461,477 911,148 2,756,785 |
|-------|--|---------------------------------|---------------|---|-------|--------------------------|---|
| - | 4,164,460 | 542,349 | 3,855 | 103,186 | 3,338 | 59,451 | 4,876,639 |
| NS W | 17 554 | | e ars. | 11 461 | 932 | 138 | 32.585 |

9,744 3,143

4.435

N.Z. FRUIT EXPORTS.

Victoria

Queensland

South Aust.

Western Aust. ..

Tasmania

400,399

1,060

25,704

38,566

106,491

TOTAL 589,774 14,179 5,643

New Zealand shipped in the 1936 season a grand total of 1,072,368 cases of Apples and Pears to the U.K. and

Apples for U.K. totalled 940,016 cases (including 44,278 cases in February), Apples for Continent 22,099. Pears for U.K., 89,100; Pears for Continent, 21,268.

The Port of HULL

THE FRUIT CENTRE

2,995

1 274

2.661

47

18,438 1,029

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Registered Shipping No. 6.

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Victoria: Harcourt Fruitgrowe's' Progress Assn. Ltd. Harcourt Fruit Supply Co. Ltd. Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board. New South Wales: Griffith Producers' Co-op. Co. Ltd. Batlow Packing House Co-op. Soc. Ltd.

BRISBANE

Fruit Prices in the Sydney Market Bananas: Arrival

Survey of Operations for the Period August 25 to September 25

Congenial Weather Aids Fruit Consumption — But Dry Weather Affects Crop — Apple Prices Firm Steadily — Tomatoes Popular — Export of Valencias Inconsiderable.

By L. T. Pearce, Market Representative, Fruitgrowers' Federation of N.S.W.

travelling to the beaches of Sydney when prices are high, fear a cessation and consequent demand for fruit. Some rain was experienced around the latter end of this week has seen Sydney late in August, but very little rain at all has fallen for some Tasmanian arrivals at a lower figure months in the fruitgrowing districts in the vicinity of Sydney and on the coast amongst the citrus groves. The effect of this has been that Valencias from late coastal districts are generally of good keeping quality, but the size is noticeably small and rain will be required at an early date if the fruit is to attain a satisfactory sale-The steady weather experienced appears to have resulted in a good setting of fruit in the early districts, but Apricots, Plums and Peaches also will require moisture at an early date.

Reduced supplies of Apples upon the market caused a steady firming of popular types. Late N.S.W. Granny Smith and Delicious gradually obtaining appreciation. The warm weather caused an early demand for salads, and Tomatoes, in consequence, were in request, the growers of glasshouse fruit and late consignments from Queensland receiving a good re-

Export of Valencias to the United Kingdom and Canada has been conducted, but only on a small scale, and Lemons continued to be forwarded to both Eastern and Mediterranean mar-

Tasmanian arrivals for the four weeks ending September 22 totalled 60,700 cases. The Victorian supplies are unknown. The Tasmanian arrivals decreased from 19,000 to 14,000, values steadily firming as the supplies became less. Cleopatra finished from all sources during the month, and supplies of Yates from Victoria became a feature of the market, most arrivals being very small in size. Increased values were particularly noticeable in relation to Crofton, which rose to 14/-; Tasmanian Delicious which sold freely to 13/-, while a few extra special realised 15/-. N.S.W. Delicious experienced an uncertain request for exclusive shops at values up to 18/-, and Granny Smith from all sources of counts 113 and smaller

ILD SPRING WEATHER char-, the Tasmanian Scarlet, and the unacterised most of September, appreciated Sturmer improved in resulting in much week-end value. Agents, as is always the case of demand, and it is reported that the sale of a portion of this week's than was obtained earlier in the week.

> Inspectors report that there has been an improvement in the grading marks upon the cases in relation to arrivals by boat, and it is probable that the correction which has been administered will now be more easily administered to local grading condi-Prices: For Special and tions. Standard grades, quoting in three groups: (1) 3in. and over, (2) 23in. and 2½in. and (3) 2½in. and 2½in.:— Crofton (Tas.) 8/- to 10/-, 11/- to 13/-, 9/- to 12/-; Delicious (N.S.W.) 14/- to 16/-, 14/- to 17/-, few higher; Delicious (Vic. and Tas.), 10/- to 13/-, few higher, 8/- to 12/-; Democrat (Tas. and Vic.), 7/- to 10/-, 9/to 11/-, 7/6 to 9/-; Democrat (N.S.W.) 7/- to 11/-, 10/- to 12/-, 9/- to 12/-; French Crab (Tas.), green 8/- to 9/6, 10/- to 12/-, few 13/-, 8/- to 10/-; Geeveston Fanny (Tas.), 10/- to 11/-, 8/- to 10/-; Granny Smith (Tas. to 14/-), N.S.W. 10/- to 14/-, few 15/-, 12/- to 14/-, few 15/-, 8/- to 11/-, Plain Grade 10/- to 13/-; Jonathan (Tas. few to 13/-), Vic. 8/- to 9/-, 10/- to 12/-, 9/- to 11/6; Rome Beauty (N.S.W.) 8/- to 10/-, 10/- to 12/-, 8/- to 12/-, Rome Beauty (Vic. and Tas.) 8/- to 12/-; Scarlet Pearmain (Tas.) 7/- to 8/-, 9/- to 10/-, 7/- to 9/-; Sturmer (Tas.) 7/- to 8/-, 8/- to 10/-, 6/6 to 8/6; Yates (Vic.), 10/to 12/-, 9/- to 12/-. Plain and "D" grades lower.

During the month, Beurre Bosc, Glou Morceau and Winter Cole varieties finished for the season and improved values resulted for the remaining varieties coming to the mar-ket. Chief supplies have been coming from Victoria, N.S.W. being finished. Prices:-Quoting in three groups for Special and Standard grades, (1) 3in. and over, (2) 2%in. and 2½in. and (3) 21in., 21in. and 28in.:-Broom Park (Vic.) 7/- to 8/-, 9/- to 10/-, 8/- to 9/-; Josephine (N.S.W. and Tas.) 9/6 to 10/-, 10/- to 14/-, few higher, 8/6 to 12/-; Packham's (N.S.W., Vic. and were always wanted.

At the time of going to press, counts
72 and 88 were not meeting with a demand which holders of these sizes would like to see. Even the last of "D" grades lower.

Tas.) 9/- to 12/-, few higher, 10/- dard. Counts 64 to 96, Local 4/6 to 6/-, Inland 4/6 to 6/-; counts 113 to 6/-, Inland 4/6 to 6/-, Inland 4/6 to 6/-, Inland 6/- to 7/-, few 8/-, Inland 6/- to 7/-, few 8/-; counts 150 to 216, Local 5/- to 6/-, Inland 5/- to 6/-

Arrivals on the Sydney market totalled 33,248 tropical cases, of which quantity 29,699 came from N.S.W. and 3,549 from Queensland. An additional 4,000 or 5,000 would be cleared at Newcastle, and a number of country ripening rooms would also forward to their particular N.S.W. clients. In addition a small quantity would be forwarded from buyers in Queensland. Arrivals are lighter than at this time last year when the average was 9,000 to 11,000 cases per week, as against 7,000 to 9,000 at the present time. Even distribution has resulted in steady values, although much of the fruit has been small in size as a result of the extremely dry conditions existing on the north coast of New South Wales. Light rains have been experienced during the past week, but further moisture will be required to develop the fruit to the requisite size. Prices:-Regulation graded, first quality fruit. Six inch 14/- to 16/-, seven inch 16/- to 18/-, eight and nine inch 18/- to 21/- per tropical case. Incorrectly graded, medium and poor quality lower.

Citrus Fruits:

Grape Fruit: Supplies have not been considerable, but again the dry weather affected the size of coastal Grape Fruit, and this was not wanted. A few exclusive types of Marsh's Seedless and Wheeny have sold to 10/- and 12/-, but most sales have been from 2/- to 7/-. Prices:-N.S.W. Special and Standard. Local: Counts 56 to 72 4/- and 7/-, few extra special to 11/-, other counts 2/- to 4/- per bushel. Inland: 5/- to 7/-, extra choice 10/- to 12/- per bushel.

Oranges-Navels: Due to packing houses being engaged upon the export of Valencias, Navels improved in value, but successive heavy delivereries of Navels from the Irrigation Area during the third week in September resulted in a sudden drop in the market. Two bushel crates were conspicuous, much of the fruit being large in size and the sale of this particular package caused a reduction in the demand for bushel case fruit.

Early in the third week in September crates had improved to 15/-, in some instances, and bushels were selling to 9/-, but values receded to the prices mentioned hereunder. washing of Oranges to remove Red Scale appeared to occur with a lot of this recent fruit, and when not sold immediately, brown markings and a softening of the fruit quickly resulted, and difficulty was experienced in clearing. The dry season on the coast has resulted in the late orchards having fruit of good keeping quality and supplies should continue to arrive for some time, particularly from Mangrove Mountain.

Prices:-N.S.W. Special and Standard. Counts 64 to 96, Local 4/6 to per bushel. Plain 3/- to 5/- per bushel. Two Bushel Crates: Standard 9/- to 11/-. Plain 6/- to 9/-.

Valencias: Small consignments have been noticed around the market, most of the fruit being small, and some of it obviously windfallen. It is reported that some orchards have fairly good crops showing, but rain will be required to bring this fruit to full size. As a result of the dry weather, some Black Spot is reported to be showing, but it is probable that rain would check this. Prices:—3/6 to 6/-, with an occasional 6/6 per

Other Oranges: Most of these arriving have cleared at 3/- to 6/-, demand being affected by the superfluous quantity of Navels just recently. Prices:—N.S.W. Special and Standard. Counts 150 and larger 4/to 6/-, other sizes 3/- to 5/-, Seville 3/- to 5/- per bushel.

Mandarins: Late arrivals are mostly small in size again, due to the dry weather, but special Hills District fruit and large fruit from Mangrove Mountain has met with good request up to 9/- per bushel. The majority of arrivals, which have been of counts 300 and smaller, when firm, have sold around 3/- per bushel. Prices:-N.S.W. Special and Standard. Emperor—Counts 140 to 240 5/- to 8/-, special Hills District and Mangrove Mountain to 9/-, counts 260 to 300 3/6 to 5/-, smaller 2/- to 3/- per

Lemons: Factory operations practically ceased about the middle of September, although a few are being purchased at the present time at 3/a bushel. Some accumulation resulted amongst large sizes, but this was less noticeable this year than is customary. Only low values have been received on the open market, retailers' requirements being very limited. Supplies from inland sources were very light. Prices:-N.S.W. Special and Standard. Counts 96 to 125 3/to 5/-; counts 138 to 216 4/6 to 7/-; counts 234 to 270 3/6 to 5/-; Plain Grade 2/- to 3/-; Inland 6/- to 8/ner bushel.

Loquats:

A few only of these have appeared recently and have sold at 3/- to 5/per bushel case.

During the second week in September, choice quality improved to 14/-, but the attractive prices induced fruit from Queensland, which mostly sold up to 10/-, and local fruit eased in consequence. Prices:—N.S.W. choice 10/- to 12/-, medium 6/- to 9/-, small 2/6 to 5/-, Queensland to 10/- per half case.

Approximately 15,000 tropical cases arrived from Queensland, most of the fruit being well developed, so that small sizes met with good request Prices:—Queensland, counts 14 to 15 8/- to 9/-; counts 18 to 21 8/- to 9/-, few 10/-; counts 24 to 33 7/to 10/- per tropical case.

Arrivals for the month were just under 2,000 tropical cases, well colored fruit at all times met with good request. Prices:-Queensland 5/- to 12/- per tropical case.

Strawberries:

The Queensland season for Strawberries is now nearly finished, and N.S.W. supplies are steadily increasing. The weekend trade was at all time better than the mid-week trade, values being approximately as follows:-Queensland 3/- to 5/- per tray,

(Continued on page 33.)

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CITY FRUIT MARKETS, SYDNEY

Victorian Fruit Marketing Association

The monthly meeting of the Executive of the Victorian Fruit Marketing Association was held in the Board Room, Commercial Travellers' Association, Melbourne, on Friday, Septem-18, 1936, at 11 a.m.

There were present Messrs. A. Harrison (Vice-President), in the chair, W. H. Carne, J. B. Mills, G. Harrison (Vice-President), in the chair, W. H. Carne, J. B. Mills, G. H. Sprague, W. P. Hutchinson, G. Douglas, K. Eagle, H. M. McLean, E. Russell, F. R. Mellor, F. Cave, S. Brown, J. J. Tully, F. Moore, W. A. Thiele, J. W. Barker, C. H. Jost, F. C. Pyke, C. P. Nobelius, N. N. McLean, W. McGowan, and the Scretary, R. E. Boardman. Apology received from J. M. Ward, Sunt. of received from J. M. Ward, Supt. of

Federal Grant, 1936.

Confidential letter received from Mr. J. B. Mills, President of the Australian Apple and Pear Export Council, giving details of the delegation to Canberra and the request to the Government for a bounty of 1/- per case.

Mr. Barker stated that the system of bounties, which had operated during the past three years, was not satisfactory to the industry. Freights should reduced to near pre-war which could be done by the Government reducing charges against shipping companies, enabling a reduction to be made on fruit freights and the shipping companies themselves to provide a further reduction. The present system of announcing a bounty at the close of the season was not in best interests of the industry. trade agreement with Germany was urgently needed. Australian Apples were wanted there. Last season inferior Chilean Apples were selling in Germany at the equivalent of 15/- to 28/- per case. He moved:-

That it be a recommendation to the Australian Apple and Pear Export Council that the Government bonus or bounty be applied direct to the shipowners carrying fruit from Australia overseas by way of a subsidy to be applied by the shipowners as reduction in ocean freights to or near prewar rates.

Mr. Mills pointed out certain difficulties, including the fact that any re-

FRUIT PRICES IN THE SYDNEY MARKET.

(Continued from page 32.) 7/- to 12/- per dozen boxes. N.S.W. 8/- to 12/- per dozen punnets. Tomatoes:

Queensland forwarded just over 76,000 half bushel cases, and several small consignments arrived from Western Australia during the last week. Values throughout the month have been very satisfactory, the warm Spring weather recently experienced improved demand, fresh arrivals realising to 12/-, while local glasshouse, which were plentiful, have had good The thin-skinned type of Tomato grown by the few hothouse growers usually attains a price several shillings higher than the glasshouse fruit. North Coast Tomatoes are expected at an early date, but unless rain is received, those producers irrigating their crops are likely to have the market largely to themselves for some time. Prices:-N.S.W. glasshouse 10/- to 14/-, hothouse 12/- to 16/+ per half bushel case. Queensland Bowen and Brisbane 8/- to 12/- per half case. Repacked 10/- to 14/- per half case. Western Australia 8/- to 10/- per half case.

duction in Governmental charges would apply equally to all ships, and that the proportion which could be applied to a reduction in fruit freights might thus be totally inadequate.

Mr. Thiele stated he had been requested to bring forward the matter of a contract between a grower and shipper, whereby the price of the fruit was fixed, excluding any subsequent bounty.

Several speakers said that the matter of agreements between individuals concerned the contracting parties only.

The Chairman said that Government assistance would be best in the form of freight reduction; any bounty should be pre-determined, thus making the position quite clear when contracts were being made. Shippers had had to bear big losses last season. Many growers who did not consign, and who took no risk, but sold at an agreed price were being bountied at the expense of the taxpayer. The bounty should be to those who shipped on consignment.

Mr. Hutchinson said he agreed that the one who exported on consignment, grower or shipper, should get the bounty. But growers were asking whether the bounty was going to shippers in addition to the profit they made in fulfilling overseas buying

Mr. Russell stated that a shipper who received an order for, say, 20,000 cases had to buy up to 30,000 cases in order to get the varieties and sizes needed, and to spread the shipments. On the excess thus bought and sent on consignment, shippers were showing substantial losses; the bounty should be received by those who could produce actual account sales.

Mr. Moore, while agreeing with the necessity for more equitable distribution of the bounty, said there were other issues involved, namely, the quantity of fruit which should be sent, and the uneven arrivals. It had estimated that London bluos take 250,000 cases per week, but in one week last season over 600,000 cases arrived. Freight reduction was essential. He understood 80 per cent. of the fruit from Victoria this year was sold forward, a certain proportion which was at the risk of the shippers. The question of a bounty needed to be approached with care, because if our fruit were bountied it could re-act against us in the U.K. markets. He moved as an amendment that this matter should be left to the discretion of delegates at the

Mr. J. J. Tully seconded the amend-

Mr. Carne said that apparently the policy of the Government was to wait till after the season before announcing what grant would be made. He considered that the shipper who sent fruit on consignment was entitled to the bounty. A pressing matter was that of a trade agreement with Germany, and the Government should be urged to take prompt action.

The Chairman, in reply to Mr. Hutchinson, said that last season one firm bought 80,000 to 90,000 cases; sold 56,000, thus leaving 20,000 to 30,000 to go forward on consignment. The price paid was 5/- for Apples and 8/- for Pears. Yet under the bounty arrangement the growers would receive the additional sum, while the shipper was at a heavy loss. Had the export last season been left with the growers, not 100,000 cases would have gone forward on consignment; chards and in particular from "backconsignment to London, just they did with interstate trade. The fruit industry was as much entitled to a bounty as any other industry. Let the bounty be a substantial one, and apply to those who shipped on consignment.

In reply to a question, Mr. Barker stated that his remarks regarding bounty or freight reduction had reference to future shipments, commencing with 1937.

Mr. Moore's amendment was carried

Annual Meeting.

It was decided to hold the annual meeting at the C.T.A., Melbourne, on October 16, at 2.30 p.m. An Executive meeting to be held the same morning at 11 o'clock.

Apple and Pear Council.

Grower delegates were apointed:-Messrs. G. W. Brown and W. H. Carne (Mr. Brown to be on Executive). In case of non-attendance of Mr. Brown, Mr. J. J. Tully to be the delegate. Mr. F. Moore was elected as the delegate for the Pear interests, and as the alternative member on the Council's Executive.

The preliminary agenda was considered in detail. It was decided to add the following:-

- (1) Necessity for continuing the Federal Research Grant.
- (2) That the Council give further consideration to the question of developing the Australian market for Apples, and that advertising be part of the programme.
- (3) The matter of the name of the Council, and as to whether it should be named in future the Australian Apple and Pear Council (thus deleting the word "Export"), was left with the delegates to use their discretion. (The question of finance was discussed, as the Council is at present financed on an export basis).
- (4) The question of the elimination of Pear varieties (referred to Pear Committee for report at next meeting of Executive).
 - (5) Trade treaty with Germany.
- (6) The question of an excise on Apples and Pears grown in Australia to provide finance for safeguarding and developing the industry (referred to Special Committee for report).

In speaking on the subject of continued research, Mr. Moore said there was urgent need for this, as the previous vote was for one year only and if not continued, the money would be wasted. But he did not want the funds to be provided by way of a deduction from the grant to growers.

Broadcasting Spraying Advice.

Mr. C. P. Nobelius stated the menace still existed regarding Codlin Plum export, and trade with New Zea-Moth infection from unsprayed or- land.

growers should send their fruit on yard" fruit trees. He urged that the Department should publicly announce the necessity for spraying trees with lead arsenate before the first week in November, spraying again three weeks and again three weeks later than the second spraying. After discussion, it was decided, on the motion of Messrs. Carne and Thiele, to request the Department of Agriculture to publish statements in the press, and broadcast (1) as to the necessity of spraying fruit trees seasonably to control Codlin Moth, so that "one-tree orchardists" would attend to this duty; and (2) to broadcast and publish information as to the peak flights of moths, so that orchardists could be advised in this connection; the Department to secure information as to peak moth flights in different districts; the broadcasts to be about 7 p.m. Information was broadcast re frost danger. Similar broadcasts re moth infestations would be of great value.

Advertising Fruit.

Mr. Moore directed attention to the increasing quantities of Apples and Pears being produced in Australia, and the apparently contracting market overseas. Statistics recently published showed that the consumption of Apples in Australia was less than half an Apple per day per head of population. There was an enormous sum invested in Australian Apple production, vet nothing was being done to educate the public as to the health and food value of Apples. On the other hand, a comparatively small body of Celery producers in S. Aust. found it of value to carry on propaganda to maintain and increase the sale of their product. Export growers were levied to organise this section of the industry, while the rest of the producers did not contribute anything to develop the home market. Grow ers should bestir themselves in this connection, for the salvation of the in-

Mr. S. Brown spoke in support, He would like an assurance from the shippers, however, that everything possible was being done to maintain the export trade.

Mr. Mills stated that the efforts of the Australian Apple and Pear Export Council were fully devoted to the development of the export trade. New problems cropped up each year, and the Council was fully alive to its responsibilities. An excise duty on all Apples and Pears sold, collected by means of case stamps, would bring in sufficient for a campaign that could not fail in its objective.

Other items included Sydney carters charges and Pear statistics (from N.S.W. Chamber of Fruit and Vegetable Industries), power alcohol,

Herbert Wilson Pty. Ltd.

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VERMONT FIELD DAY.

A Big Success

T HE VERMONT FIELD DAY on October 1 was a complete success. This was held, as before, at the orchard of Mr. F. G. Beet, under the auspices of the Victorian Fruit Marketing Association and kindred Associations. Between 300 and 400 growers attended. There were demonstrations of orchard machinery and equipment, and displays of fruit drinks, Apple vinegar, spraying materials. During the day there were lectures by experts and demonstrations of reworking fruit trees. Further details next issue.

THRIPS OUTBREAK.

As we go to press an outbreak of thrips is reported in Victoria. Thrips are prevalent in Kiewa Valley, Harcourt, and Doncaster. The extent of the infestation is not yet known. Warm weather would cause the pest to multiply.

Treatment recommended by the Department of Agriculture is spraying or dusting of unopened buds. A finely ground substance like kaolin, applied as a wet spray, to which a spreader has been added, may form a temporary mechanical barrier over the openings into buds, and prevent the entry of thrips. The spray is cheap and harmless. and may be applied in heavy doses. In the case of open buds the aim should be to apply an insecticide. Dusts are convenient, one formula being:— "Kaolin or talc, 80 or 70 cent.; finely ground Derris, 15 or 20 per cent.; finely ground pyrethrum, 5 or 10 per cent. For those desiring to use a spray, a formula suggested is:-Finely crushed Derris root, 2 lb.; soap, 5 lb.; water, 100 gallons. This spray can be made by the grower, and must be used immediately after preparation. The dust formula may be used also for bush and berry crops and for garden flowers.

Market Notes and Prices

VICTORIA.

Market Report for September.

Normal business was reported at the wholesale fruit markets in Melbourne during September. In the citrus section Navel supplies dropped off. South Australian and Mildura supplies were maintained to fair prices, with normal parcels from other districts. Mandarins have finished, except for large varieties. There was a slight improvement in Lemons towards the end of the month. Grapefruit, supplies and demand fair and movements quiet, prices were about as expected.

No fluctuation was reported in Apples, reasonable prices and supplies ruled. Celery is finishing with the quality dropping. Asparagus sold well to good prices, some green varieties still coming to hand.

Pineapples had a regular supply right throughout the month, and fetched satisfactory prices for small grades. Tomatoes: Adelaide supplies started off well, but were decreased, owing to the heavy demand created by the Centenary influx of visitors. West Supplies are now increasing. Australian Tomatoes are arriving on the green side. Passionfruit supplies increased, and prices eased

Melbourne (2/10/36).—The following prices were quoted by the Wholesale Fruit Merchants' Association of Victoria:-Per Case: Apples, eating 5/- to 7/-, few higher; cooking 4/- to 6/-, few higher. Bananas, per double case, green, best, 13/- to 19/-. Celery, S.A. 6/- to 9/-, choice higher. Grape fruit, 4/- to 10/-, few selected higher. Lemons, 4/- to 7/-, a few higher. Mandarins, 4/- to 9/-, few higher. Navel Oranges, 4/6 to 10/-, few higher. Papaws, 7/- to 10/- double case. Pineapples, 7/- to 9/-, few higher to 10/-. Passionfruit, 14/- to 26/-, choice higher.

The Melbourne market manager of the Federal Citrus Council of Australia reports that there was better demand for citrus fruits during the week. Quotations were as follows:— selling to 12/-, Crabs 12/-, and G. Navel Oranges, average standards, Smiths to 15/-.

75-84, 4/6; 96-112, 5/-; 126-140, 6/- to 6/6; 154-168, 7/- to 8/-; faulty lines lower; good standards, 4/6 to 8/-, a few 9/-; selected standards, 5/6 to 10/-; a few 11/-; specially selected higher. Grapefruit, Marsh seedless, average standards, 4/- to 7/-; selected, 5/- to 9/-; specially selected, to 10/-; a few, 11/- and 12/-. Lemons, average standards, medium sizes, to 5/- and 6/-; large, from 3/-; selected, to 7/-; a few, 8/-. Mandarins, best counts, 7/- to 9/-, acording to quality; good reds, to 10/-; a few higher. Common Oranges, average standards, to 5/-; a few 6/-; selected, to 7/-, a few 8/-; a few specially selected medium sweets higher; specially selected bloods, to 10/-.

QUEENSLAND.

Brisbane (19/9/36).—Messrs. Clark & Jesser reports as follows:-During the past month supplies of Apples have been maintained, and there has been very little alteration in values. The chief feature of the market of late has been the sharp rise in Tomatoes. At the present time there are on choice quality Tomatoes available, and inferior lines are selling at high prices.

The ruling prices at present are-Apples: Jon., $2\frac{1}{2}$ and $2\frac{3}{4}$ size 11/- to 11/6, $2\frac{3}{8}$ 10/- to 10/6, $2\frac{1}{4}$ 8/- to 9/-, other colored Apples 10/- to 11/-. Cookers are very scarce, French Crabs selling 11/- to 12/-, G. Smiths 13/- to 14/-. Pears: W.C. and Jos. 13/- to 14/-, W.N. 12/- to 13/-, Broom Parks 9/- to 10/-. Mandarins: Emperors, large 11/- to 12/-, Grants, large 10/- to 11/-, small 6/- to 8/-. Oranges: Navels 7/- to 8/-, Val. 6/to 7/-. Lemons: 8/- to 9/-. Bananas: sixes 10/-, sevens 12/- to 13/-. Pineapples: Rough, 8/- to 9/- case, smooths, 5/- to 6/-. Tomatoes: 10/to 12/- case.

The weather here now is becoming very warm, and the demand should improve for citrus fruits.

Brisbane (16/9/36).-Messrs. Robsons Pty. Ltd. report as follows:-All descriptions of Apples are selling

Our local citrus is now finished, Southern Vals. selling to 8/6, Navels to 9/-, and choice Gayndah Lemons to 12/-; Mandarins, if sound, to 13/-.

Pears, choice Coles to 15/-, Jos. to 14/-, and Packhams to 13/-. Passionfruit are selling well to 12/- case. Papaws are realising to 10/- trop. case. Pineapples, smooth leaf to 6/6, and roughs to 10/- C/s. Bananas, 6's 10/- to 11/6, 7's 12/- to 13/-, 8's to 15/-.

Fruit should now meet with a good demand, as the climate conditions are

WESTERN AUSTRALIA.

Perth (23/9/36). — Apples, Jons. dumps 8/- to 9/-; Dunn's 5/- to 9/6 (special to 10/-); R. Beauty 7/- to 10/-, Yates 5/- to 12/- (special to 12/6), G. Smith 8/- to 12/3 (special to 13/-), Cleo. 4/- to 8/6, Nickajack 6/- to 9/6, Del. 7/- to 12/- (special to 13/-), Rokewood 5/- to 9/9. Citrus: Val. flats 4/- to 8/- (special to 9/3), dumps 5/- to 11/9; Navels, flats 4/- to 9/-, dumps 8/- to 16/6 (special to 17/6); Lemons 3/- to 7/- (special to 10/9); Mandarins 4/- to 9/- (special to 11/9). Other lines: Passionfruit, quarter-dumps to 11/-; Pears, Keiffer, dumps 11/- to 13/6; Jos. 8/- to 11/6; Tomatoes, half-dumps 6/- to 14/3 (special to 16/-), flats 10/- to 22/-(special to 23/9).

NEW ZEALAND.

(18/9/36).Dunedin Reilly's Central Produce Mart Ltd. report as follows:-Good quality dessert Apples are in demand with higher

Oranges are very short, supplies having been cleared out of wholesalers' hands. Transhipments received during the week consist of Cal. Lemons, Grapefruit, and Grapes, and also small consignments of Tongan and Samoan Bananas ex the "Ratua."

Shipments of Pineapples are rather in excess of requirements, and values have dropped.

case).—Cal. Lemons Prices (per 70/-, Grapefruit 35/-; Grapes, Red Malagas 27/6, Ribiers 27/6, Aust. Navels and Val. 16/- to 22/-, Mandarins 20/- to 29/-, Ripe Bananas 22/6, Pines 16/- to 18/6, Apples, Jons. 7/- to 8/6, Del. 8/- to 10/6, Sturmers 6/- to 8/6, Rome Beauty 5/- to 6/-, Lord Wolseleys 6/-, cooking Apples 5/- to 6/6; Black Spot second grade fruit 3/- to 4/6; Pears, choice W. Cole 10/- to 12/-, cooking Pears 5/-; Lemons 16/- to 18/-, Marmalade Oranges 10/-.

SPECIAL NOTICE FRUITGROWERS TO

All Members under Fidelity Bond In response to numerous requests from growers for information as to who are members of the

Wholesale Fruit Merchants' Association of Victoria the following list is given. All are members of the above Association, and are registered firms carrying on business in the

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H. M. WADE & CO. (21). DAVID SMITH PTY. LTD. (3).

Correspondence is invited by the Association.

SILBERT, SHARP & DAVIES PTY, LTD. (17) W. A. WATKINS (5) P. A. PATRIKEOS (36) G. WOOLF & SONS (29-30). F. CAVE & CO. PTY. LTD. (9). R. CORNISH & SONS (5).

J. HYMAN & SON (51).

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(No. 14 of Series.)

NEW SOUTH WALES.

THE FIRM OF WM. MUSGROVE | varieties which stood up to the slower commenced activities in the New South Wales fruit trade during 1900 in the old Belmore Fruit Mar-The firm quickly gained the confidence of growers who were sending fruit to Sydney market, and Mr. Musgrove's personal attention to all business, and periodical visits to the different States, brought him many friends. His visits to growers in N.S.W. and Tasmania and Victoria



W. Musgrove.

each year were looked forward to by the growers, as they realised that he was on the spot at the time of the arrival of the fruit in the market, and his observation, particularly in regard Vegetable Industries, an organisation to packing, grading, and manner of presentation of their fruit, were worthy of notice. It was realised by the growers that it was a distinct advantage to entrust their fruit to a firm whose activities were confined to selling on commission only, and as a grower's agent his only desire was to a regular demand for good quality

methods of transport which were available in these days, and for which there was a regular and consistent demand.

In addition to rendering this valuable service to growers, Mr. Musgrove established a reputation amongst buyers, including retail fruiterers in the city and country areas, who attended his market floor, and were able to buy regular lines of good quality, well packed fruit.

The confidence established by Mr. Musgrove resulted in his selection as one of the agents for the Tasmanian Fruit Advisory Board, of which body he has been one of the accredited agents since its inception. In addition, he has been accredited agent for packers and shippers of fruit in various parts of Victoria.

Mr. Musgrove has been one of the pioneer movers in every attempt that has been made in New South Wales to improve the marketing conditions, and at the present time he occupies the position of Senior Vice-President of the N.S.W. Chamber of Fruit and formed to work co-operatively with those organisations shipping fruit to Sydney, and help in every way to coordinate consignments of fruit sent from the various States to New South Wales.

Mr. Musgrove has been a Justice of obtain the highest prices and develop Peace in N.S.W. for over twenty-five years. He is a keen grower of Carnafruit to their mutual advantage.

It was also in the interests of the he is considered one of the soundest grower and his agent to send to the in N.S.W., and frequently officiates N.S.W. markets only those fruits and at flower shows.

QUEEN VICTORIA MARKET, MELBOURNE.

MEETING of the Victoria Market Combined Traders' Council was held in the Temperance
Hall, Russell-street, on August 26,
the following delegates being present:—Messrs. H. Wade and H. Wilson (Wholesale Fruit Merchants); F. G. Beet and E. Noonan (Southern Fruitgrowers); H. V. Barnett and E. A. LePage (Market Gardeners); H. Kruse and C. Maudsley (Retail Fruiterers); W. Jeeves and A. A. Kay (United Berry Growers); S. Lyall (Produce Merchants); J. W. Aspinall and E. W. Thompson (Advisory Board). Apologies for absence were received from Cr. C. C. A. George, and the Flowergrowers. Mr. H. Kruse

had expressed the views of their respective Associations, a resolution was carried opposing any alteration of the existing opening and selling hours.

It was also resolved that the Market Committee of the City Council be advised accordingly, and that the attention of the authorities be drawn to Ltd., of 107-113 Elizabeth-street, Melthe great amount of trading that goes bourne, the price being 5/-

on before the opening hour, and ask that action be taken to curtail same.

It was decided to request the City Council to provide better parking facilities for retailers' vehicles. Complaints were made about the slippery state of the footpaths leading up between some of the sheds, and the Secretary was instructed to draw Mr. Minn's attention to them.

PUBLICATIONS RECEIVED.

received from Cr. C. C. A. George, and the Flowergrowers. Mr. H. Kruse presided.

A discussion took place in reference to the opening hour of the Victoria Market, and after almost all delegates had expressed the views of their repages filled with useful instructions. The information is set out clearly, the methods of pruning for the various varieties of fruit being set out

> The publishers of this excellent book are Messrs. Robertson & Mullens

ENTERTAINING CHILDREN.

N THE PRAM the child soon requires something to hold and play with, and this should be given so that the little one can strengthen his fingers and arms. It will not be long before he will be throwing them out, so care must be taken in case he leans too far over the edge to retrieve his favorite toy.

As a safety device, use shoulder straps. These can be made quickly, dainty and inexpensively. For knock-about pair, use stout, fadeless colored fabrics; for a gift pair, calico can be used for lining to a fuil or bemberg silk pair, working tiny sprays of flowers with silks; or for a boy work a tiny animal or bird.

An inexpensive pair of straps can be cut from sugar bag or hessian, strips cut 2½ in. wide, ¼ in. for turning, then fold in half and press, making straps 1 in. wide. The circular strap around baby's waist is 24 ins. long, straps over shoulders 111 in.; front cross strap 7 ins. back cross strap 6½ ins. hanging side straps 14½ These measurements allow for 1 inch at the end to tuck in where

the straps are joined.

The child of 18 months loves climb stairs, and to reach up for objects, to climb on boxes, fences or rails. He can throw a ball and run after it and loves to scribble and make marks with a pencil or to build blocks and knock them over. If parents do not provide the opportunity for children to do things such as these, they are retarding their development to that extent, and are encouraging the climbing on chair and tables, and scribbling on walls and books. Even at this early stage, the child needs a place of his own. It need not necessarily be a room, a corner of a verandah will do, or somewhere to place his treasures and call his own.

In the garden he should be encouraged to climb, run, push and pull toys, and in every way exert his growing strength and to educate his muscles. When a toddler comes into the kitchen demanding entertainment, try the method of providing education at the same time. A set of canisters or saucepans will amuse a child for an hour. Take off the lids and mix them up, and allow him to fit them on correctly. He will probably repeat the performance many times. Next let him arrange them in steps, in order

partments. All these occupations are really exercises for training the eye and judgment. On a warm day in Summer, let toddler have a bucket of clear water, a jug and a variety of containers. He will spend delighted hours pouring, lifting, and emptying. The result will be seen in his ability to hold and carry the vessels full of liquid without spilling a drop.

Training and Entertaining.

It is well to remember "Never do for a child that which it can do for himself." Mother should show toddler how to lace, tie and button, and then let him do it himself. It may be many days before even one is mastered, and there will probably be many muddles, but one day he will succeed, and it will be a proud and happy fellow who will soon be able to dress himself. Besides being good training for the child, it is a boon to any busy

Any one of us may be polishing a floor, and a young child, seeing one in such a position, would readily rush up and try and play "Gee-Gees." I have been in this predicament, and know which one will tire first of the game-the horse or the rider. Try and take the child's mind off the game by giving him a duster to help. Many discourage their zest for work rather than have them about whilst one is working. This is a mistake; many a mother's bigger jobs can be made lighter by the little one who really delights in his little daily tasks. He can take out the mats, until the rooms have been swept out, and then replace them. It will not take long to impress upon him that each one must lie straight in its own place. When sweeping, the dust pan can always be in place, and the chairs and table legs dusted.

Of course, the little ones like their toys and pets. Pet keeping, properly supervised by a parent, helps to mould a kiddy's character by giving a responsibility for the pets and increasing general knowledge.

When a mother of young kiddies is faced with a rainy day, and their demand "What can we do now?" turn the inconvenience of a day indoors to good account by giving them something to make-something to interest them, something to train clumsy fingers in deftness. Every kiddie loves a scrap book. Perhaps one a little older would like some stiff brown paper to cover the cookery book. It adds much to a child's delight to see something she has made being actually used. Modelling is always popuhim arrange them in steps, ...

according to size. When he tires of this game, show him how one will lar; also coloring pictures. Used matches colored with a fast dye are matches colored with a fast dye are the spoons, forks and knives, and child making things by using differ-place them in their respective com-

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VICTORIAN OFFICE: 8-10 Orr St., off 78 Victoria St., Melbourne, Vic.

439 Kent Street Sydney.

Mould in Oranges

Much Waste Reported

Investigations in London.

ACTORS influencing the develop- ing influence liability to rot. All of R. G. Tompkins, of the Department as is often supposed. of Industrial and Scientific Research, If Oranges are wou London, in a recent issue of "Hadar," the organ of the citrus industry in Development takes time because the Palestine. Although based on Jaffa soft rotten condition follows the de-Oranges arriving on the London market, the information conveyed may be equally applied to Oranges from other countries, says "Citrus News."

Losses in Oranges sent to the English markets are chiefly due to rots caused by green mould. Three conditions are essential for the occurrence of rots:-

1. Spores must be present on the fruit.

2. The fruit must be liable or susceptible to attack by the fungus.

3. The conditions of storage must be suitable for the development of rot.

The extent of rotting experienced in any instance is determined by all three conditions, though in certain instances it is possible to attribute the losses more particularly to one of the conditions.

If no spores are present, no rotting occurs, whatever may be the conditions of transport. The greater the number of spores present, the greater the risk of rotting. For example sample boxes of South African Oranges were dusted with green mould spores. Waste was thereby increased from 2 to 30 per cent.

Starts in Packing Shed.

Spores get on to the Oranges chiefly in the packing shed. If any of the Oranges in the wilting piles become mouldy, the spores are transferred to the surrounding Oranges. Spores get into orchard boxes and into brushing machines. Spores settle from the air of the pack-house. If managers of pack-houses take care that no mouldy fruits get into the pack-house, that orchard boxes and grading machines are clean, the chances of losses from green mould are largely reduced. If they do not, they are bound to suffer losses. Excessive losses should in the first instance be blamed on the packer for allowing spores to get on to the

Sound Fruit Not Affected.

Absolutely sound fruit is considered not liable to attack. If Oranges are mechanically damaged, i.e., scratched with nails, or damaged by grit or stung by flies, while spores are present, rotting follows. That is why damaged Oranges are removed in grading. It is also important to prevent damage to Oranges after packing. Damage can be caused by rough handling of boxes and by bumping, which in its turn may be caused by driving loaded lorries at excessive speeds over bad roads.

Seemingly sound Oranges may bear minute wounds, and be open to attack by fungi, if spores are present. It is quite well-known that Jaffa Oranges picked toward the end of the season are more liable to attack than Oranges picked earlier in the season. It is difficult, but not impossible, to measure exactly how liable to attack any sample of Oranges may be. For this reason it is difficult, but not impossible to say exactly to what extent chemical manure, type of stock, age of tree, weather conditions, or wilt-

ment of Green Mould in these factors have some influence on Oranges are discussed by Dr. the liability to waste, but not as much

If Oranges are wounded and spores are placed on the wound, rots develop. velopment of the fungus in the tissues. The number of days in which rot reveals itself depends chiefly on the temperature.

Development of Rot.

The minimum time for development at various temperatures is as follows:-

Temp. Cent. . . 5 10 15 20 25 Number of Days 30 10 6 3 3

Of course, when wounds are small the rot may take longer to develop. If one is considering large samples it is best to ask how long it will take for 10 per cent. of the sample to rot. 4. To reduce the humidity of the For 10 per cent. of the fruit to rot atmosphere. it will not take the minimum time given above, but 3-4 or 5-6 times as many days. It is certain that the duced must be below the temperature longer samples of Oranges are kept, the greater will be the number of rotten fruits. Therefore, they should be sent to the market as soon after packing as possible. The amount of waste experienced is, for similar samples, roughly proportional to the days taken to arrive in England. All delays, whatever the cause, contribute equally to increase waste.

Waste in Transport.

The lack of ventilation on ships is often said to be the chief cause of excessive waste. There is said to be evidence that carriage in certain ships always results in excessive waste. such statements should be accepted with caution. Ventilation is practised:-

1. To remove the heat produced by the Oranges.

produced.

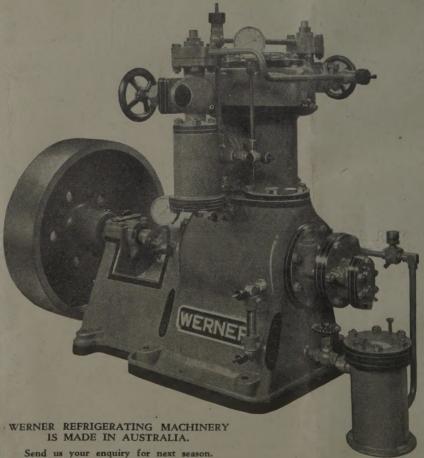
The advantage of removing the heat is obvious. To do this the air introof the fruit, and this may not always be the case. Ventilation removes the carbon dioxide and volatile products, but it is not known whether their presence has any effect on the extent of rotting. Ventilation may reduce the humidity of the air in the hold, but again it is doubtful how far this may influence rotting.

It is therefore impossible to be certain how far ventilation, as practised on ships, influences the extent of waste. Ventilation as such is not important, its value lies in the extent to which it prevents increase of temperature and accumulation of carbon dioxide, volatile products and water vapors. Temperature conditions, the amount of carbon dioxide present, and the relative humidity could all be measured, but ships are not fitted with the appropriate equipment. There-2. To remove the carbon dioxide fore, for the present, the real effects roduced. 3. To remove the volatile products. matter of surmise and opinion only.

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